ENDING ECONOMIC COERCION AND THE CONSEQUENCES OF SANCTIONS REMOVAL

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ABSTRACT

Menevis Cilizoglu: Ending Economic Coercion and the Consequences of Sanctions Removal
(Under the direction of Navin A. Bapat)

Economic sanctions have been increasingly used to advance a range of foreign policy goals. Research on economic sanctions has produced significant advancement on our understanding of the causes and effects of the usage of these tools. However, less attention has been paid to the decision to end sanctions and the consequences of this decision. This dissertation aims to fill this gap by asking three interrelated questions. First, how do economic sanctions end? To answer this question, I present a formal theory of the process through which sanctions are lifted. Specifically, I identify the obstacles to end sanctions and demonstrate how these obstacles can be overcome. I find that sanctions are more likely to end if imposers of sanctions can successfully monitor their targets' compliance behavior, but only if targets find promised sanctions relief attractive. Second, what are the consequences of ending sanctions and how do the domestic and economic environment created by sanctions removal influence the possibility of sanctions recurrence? I show that sanctions recurrence is not always a reaction to the policies adopted by the target following sanctions removal, but is primarily driven by domestic politics of the imposer country. Finally, how does ending sanctions influence the investment decisions of private firms based in the imposer country? To answer this question, I examine how firms assess risk when considering investing in economies that were previously targeted with sanctions by their home governments. I show that firms based in the sender country increase their investment in target countries following sanctions removal only if they receive credible assurances from their home government and host government that sanctions will not recur. To test the hypotheses generated in each chapter, I employ a variety of statistical tools and use several data sources, including the Threats and Impositions of Economic Sanctions (TIES), Change in Source of Leader Support (CHISOLS), and Correlates of War (COW) datasets, among others.

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CHAPTER 1: INTRODUCTION

In 2016, the United States moved towards friendlier relations with Cuba, Iran, and Myanmar by significantly easing or ending decades-long harsh sanctions on them. These decisions have provided new lucrative opportunities for American firms and benefited American consumers, while also allowing Cuban, Iranian and Burmese economies to begin re-integrating into international trade and financial networks. In addition to the economic win-win situation these sanction removals have created, they have raised hopes about the future normalization and strengthening of political ties between the U.S. and its long-standing adversaries.

Cuba has been under harsh economic sanctions since 1959, when Fidel Castro came to power overthrowing a U.S. backed regime and established a socialist state allied with the Soviet Union. Over the years, the U.S. instituted a full economic embargo, froze Cuban assets, imposed stringent travel restrictions, and labeled Cuba a state sponsor of terrorism. The U.S. has sanctioned Cuba longer than any other country, yet, after sixty years of isolationism, antagonism, and distrust, the sanctions removal process began in 2009. Between the years 2009 and 2016, the former President Obama eased restrictions on remittances and travel, legalized American telecommunication companies to do business in Cuba, re-opened embassies after fifty-four years, and removed Cuba from the list of state sponsors of terrorism.

Iran has also been the target of decades-long U.S. sanctions. The 2000s were marked with numerous attempts of nuclear negotiations by the EU-3[1] and the P5+1[2] with the Iranian regime. These multilateral efforts were successful to convince Iran to sign the Additional Protocol[3] of the Non-Proliferation Treaty (NPT), make commitments to suspend their enrichment-related activities, and allow international inspectors to monitor their progress. Over time, Iranian participation in nuclear negotiations proved to be nothing more than a stalling tactic. Between the years 2010 and

[1]France, Germany, and the United Kingdom.

[2]Five permanent members of the UN Security Council (U.S., U.K., China, Russia, France) and Germany.

[3]The Additional Protocol provides the International Atomic Energy Agency with access to declared and undeclared nuclear facilities of the signatory states.

2013, however, the harshening economic pressure on Iran by denying access to SWIFT, improved enforcement of trade and financial restrictions, the collapse of the price of oil, and denial of access to credit forced the regime to the negotiation table. Finally, in 2015, a Joint Comprehensive Plan of Action (JCPOA) signed between Iran and the P5+1, requiring Iran to limit its uranium enrichment and freeze further nuclear developments. In exchange, the coalition has committed to provide sanctions relief, lift the oil embargo and restrictions on financial transactions, and repatriate assets frozen abroad.

Lastly, consider the Myanmar case. The U.S. imposed economic sanctions in response to the military junta taking power in Myanmar in a coup in 1988 and the junta's suppression of protests, detention of political prisoners and vast human rights violations. The military junta in 2011 officially dissolved and established a civillian parliament, despite the continued dominance of the military in the government. The new civillian government spearheaded a series of political and economic reforms. These reforms led the U.S. to ease sanctions on the country, re-establish a USAID mission and name its first ambassador to the country in twenty-two years.

These three high-profile sanctions cases are very unique, yet they share major commonalities. First, all three cases ended with a negotiated settlement. Neither Cuba, nor Iran, nor Myanmar acquiesced fully to the demands that the U.S. put forth at the time of the initial sanctions imposition. Cuba is still a socialist government, Iran still has a nuclear program, and Myanmar still commits serious human rights violations. Second, the relations remain strained in three of these cases after the removal of sanctions. In fact, President Donald Trump imposed additional economic restrictions on all three of these countries shortly after his predecessor's moves to normalize relations. Third, the easing or the lifting of sanctions in all three cases were a part of a reconciliation strategy adopted by the former President Barack Obama.

The sanctions against Cuba, Iran and Myanmar, their termination, and the political, economic, and domestic implications of ending these sanctions motivate the research questions this dissertation asks and the theoretical approach it adopts. First, around 40 percent of all economic sanctions imposed between the years 1945 and 2005 ended with a negotiated settlement, just like the cases against Cuba, Iran, and Myanmar did. This necessitates the exploration of the factors that facilitate negotiations, and the successful implementation of sanctions removal deals. The majority of the economic sanctions literature examines *when* economic sanctions succeed, however, theories of

how success is achieved are underdeveloped in sanctions termination and effectiveness literatures. Therefore, in this dissertation I ask the following question: How do economic sanctions end?

Second, the scholarly interest in economic sanctions dissipates when sanctions end. How sender-target relations evolve following sanctions removal and how the decision to end sanctions shape the post-sanctions environment are questions that are not previously explored. In an effort to fill this gap, the second question of interest is: what are the domestic, political, and economic implications of ending sanctions for the sender and the target states? One aspect of the post-sanctions removal period I explore is sanctions recurrence. 37 percent of all sanctions imposed between the years 1945 and 2005 recurred within the ten year following the removal of initial of sanctions, just like sanctions recurrences in the cases of Cuba, Iran, and Myanmar. This begs the analysis of the conditions under which sanctions recur.

Third, how do target states like Cuba, Iran, and Myanmar recover following sanctions removal? Following the move to ease restrictions on Myanmar, multinational companies began showing interest in investment in the country; while Cuba is still not an attractive destination for international investment. Iran, on the other hand, receives a significant amount of European countries; while American firms are very cautious against doing business with or in Iran. To explore the differences in the economic recovery of target countries following sanctions removal, the third question of interest is: what are the conditions conducive to investment in countries previously targeted with economic sanctions?

How do economic sanctions end? What are the domestic, political, and economic implications of ending sanctions for the sender and the target states? When do economic sanctions recur? How do targets recover in the post-sanctions period? I answer these questions in three empirical chapters. The remainder of this introductory chapter motivates the project, discusses methodological approaches used in pursuit of the research questions, and provides an organizational outline for the dissertation.

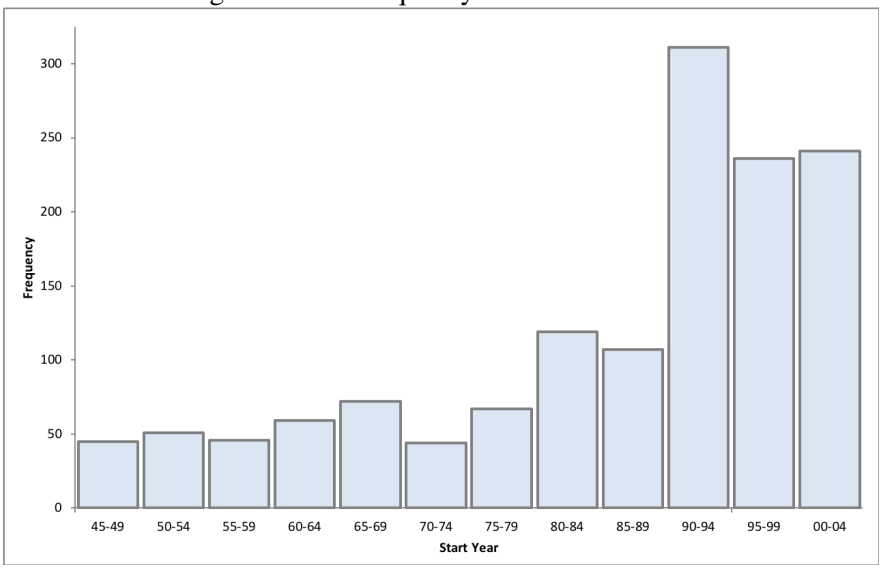
Sanctions Literature: A Missing Piece

Economic sanctions receive great attention from political scientists and policy-makers alike. This interest is a reflection of the increasing popularity of economic sanctions as a coercive foreign policy tool. In the sixty years period between 1945 to 2005, there were 845 unique sanctions imposed

and the numbers have grown significantly since 2005.[4] The most recent cases such as sanctions on Russia, North Korea, and Venezuela imposed by the U.S. are just a few examples of the efforts to pressure countries into making policy concessions by restricting trade and financial interactions with them.

Sanctioning states (senders) limit trade or financial transactions with sanctioned states (targets) and demand policy change that must be met before economic relations can resume (Haufbauer et al., 2009; Morgan, Bapat and Krustev, 2009*a*; Morgan, Bapat and Kobayashi, 2014). These demands can cover a wide range of issue areas, such as improving human rights, terminating the target's support of non-state actors, ending weapons proliferation, solving territorial disputes, and retaliating for alignment choices. When pursuing these goals, senders choose from a variety of sanctioning tools, such as total embargoes, import or export restrictions, asset freezes, termination of foreign aid or travel bans. Figure 1 shows how these coercive efforts have become a common foreign policy tool states have employed with increasing frequency, and this trend is evident especially after the end of the Cold War.

Figure 1: The Frequency of Sanctions Onset



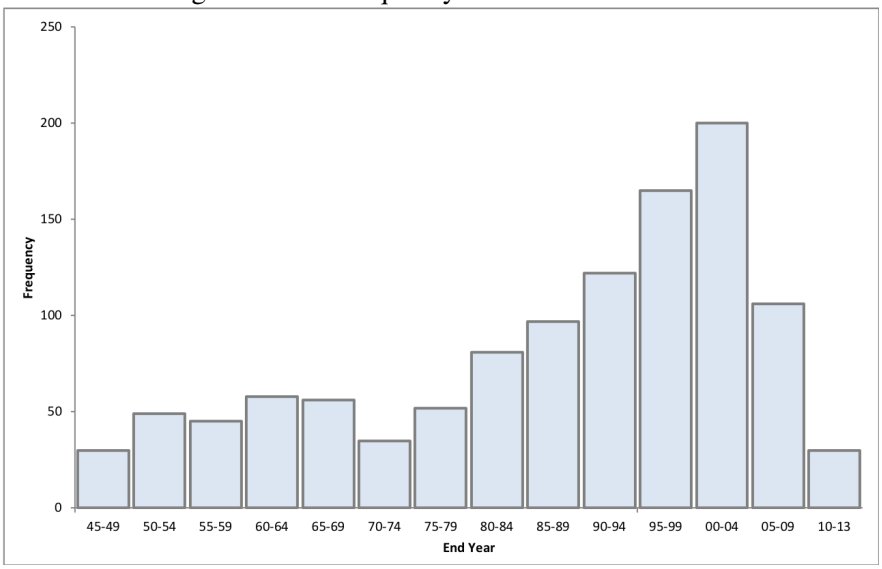
The scholarly interest in economic sanctions has matched the increasing popularity of economic sanctions as a coercive foreign policy tool. A considerable amount of scholarship has investigated when economic sanctions succeed to convince the target state to alter its policies in line with the

[4]The Threat and Imposition of Economic Sanctions (TIES) Dataset, the most complete dataset on economic sanctions, covers the 1945-2005 period.

demands of the sender. Most of these studies observe target behavior at the time of termination and consider a sanctions episode successful if the target capitulates at least partially or a negotiated settlement is reached. However, the question of *how* sanctions succeed is often black-boxed and the *process* through which success is achieved is overlooked in existing theories of sanctions termination and effectiveness. Moreover, the centrality of the question of "success" to the sanctions literature leads to the dissipation of scholarly interest in economic sanctions when they end, with or without success. Very little research has explored the consequences of the decision to end sanctions and analyzed sender-target relations following sanctions removal.

In this dissertation, I am primarily interested in understanding the process through which sanctions end. Figure 2 depicts the frequency of sanctions removal over time. As expected, sanctions removal is a common phenomenon, just like sanctions onset is, yet, the scholarly interest in sanctions termination does not match with the scholarly interest in sanctions onset. This discrepancy motivates this project.

Figure 2: The Frequency of Sanctions Removal



Methodology

To develop a theory of sanctions removal and the consequences of lifting sanctions, I use several theoretical and empirical strategies. In Chapter 2, I adopt an Empirical Implications of Theoretical Models (EITM) approach to explain when economic sanctions can be lifted while senders are facing a

trade-off between reversing sanctions' inefficiencies and risking contributing to the targets' offensive behavior. I choose to use this approach for several reasons. First, sanctions removal is a product of bargaining between the sender and the target, where the decisions each side make are interdependent decisions that are made strategically. Game theory allows me to model strategic interaction between senders and targets. Moreover, it allows me to generate hypotheses suitable for empirical testing.

I empirically test the hypotheses presented in this dissertation primarily using time-series cross-sectional data structured dyadically. I employ a variety of data sources, including but not limited to the Threats and Imposition of Economic Sanctions (TIES), Change in Source of Leader Support (CHISOLS), and various Correlates of War (COW) datasets, along with some originally collected data for this project.

Outline of the Dissertation

The organization of this dissertation will proceed as follows. In the second chapter, I develop a game theoretic model of the bargaining between senders and targets over ending sanctions and identify the conditions under which economic sanctions end. Can senders end economic coercion without the fear of strengthening their targets' capabilities? Can targets credibly refrain themselves from channeling the gains from resumed economic transactions into future offensive behavior? What are the obstacles that senders and targets face when negotiating over ending sanctions and what are the mechanism through which these obstacles can be overcome? Chapter 3 examines the period after these obstacles are overcome and sanctions end. Specifically, I ask the following questions: What are the domestic and economic implications of sanctions removal in the sender and the target country? What are the conditions under which post-sanctions environment triggers sanctions recurrence? Do senders renew sanctions to punish targets' offensive behavior in the aftermath of sanctions removal or in response to their own domestic considerations? Chapter 4 continues to explore the aftermath of sanctions removal and investigates the impact of sanctions removal on private economic actors based in the sender country. What are the conditions conducive of increasing foreign direct investment into countries previously targeted with economic sanction? How do firms assess the long-term safety of their investments in target countries? Lastly, drawing on the answer I provide to these questions in my empirical chapters, Chapter 5 discusses the policy implications of this dissertation. The conclusion

also outlines my future research program that can build on this dissertation, and the questions that this project can open the doors to.

CHAPTER 2: ENDING SANCTIONS IN THE SHADOW OF BARGAINING PROBLEMS

In July 2015, Iran, the P5+1 countries,[5] and the EU reached a Joint Comprehensive Plan of Action (JCPOA) requiring Iran to limit its uranium enrichment and freeze further nuclear developments. In exchange, the coalition committed to provide sanctions relief, lift the oil embargo and restrictions on financial transactions, and repatriate assets frozen abroad.[6] In January 2016, the International Atomic Energy Agency (IAEA) confirmed that Iran had fulfilled its key nuclear commitments, which ended nuclear-related sanctions that have devastated the Iranian economy. Since then, the agency has published nine other reports attesting to Iranian compliance. Proponents of the deal highlight the IAEA's extremely rigorous verification regime. Former Secretary of State John Kerry stressed that, "if Iran fails to comply, they are absolutely clear that they will quickly know it and respond accordingly."[7] However, concerns remain that Iran will channel the gains from sanctions relief into its nuclear program. President Trump stated on numerous occasions that "the deal allows Iran to sprint towards a rapid nuclear weapons breakout."[8] This raises the following questions: Can imposers of sanctions end economic coercion and provide sanctions relief given the fears of strengthening their opponents' capabilities and uncertainties about their targets' intentions? Can targets credibly refrain themselves from channeling the gains from resumed economic transactions into future offensive behavior?

This study identifies information and commitment problems as key barriers to sanctions removal and resumption of profitable transactions between senders and targets. I argue that sanctions removal and the subsequent sanctions relief create temptations for targets to renege on their sanctions removal deals. Given these temptations, a successful sanctions removal bargain must overcome the problem of

[5]The United States, Russia, France, the United Kingdom, China, and Germany.

[6]See "`http://www.state.gov/documents/organization/245317.pdf`" for the full JCPOA document.

[7]Kerry, J. "Remarks Before the House Committee on Foreign Affairs", 28 July 2015, Washington, DC.

[8]United States, Office of the Press Secretary."Remarks by President Trump on Iran Strategy." *The White House*, 13 October 2017, Retrieved from: https://www.whitehouse.gov/the-press-office/2017/10/13/remarks-president-trump-iran-strategy

monitoring and senders must continuously enforce compliance. In other words, any sanctions removal deal must ensure that the target state will not have incentives to exploit the deal, and the sender must have assurances that any target non-compliance will be detected. Using a game theoretic model and empirical analysis, I demonstrate that senders gain this confidence if there is a dense information flow between senders and targets facilitated by joint intergovernmental organizations (IGOs). Institutional connectedness and channels for information sharing enable senders to be informed about targets' compliance and enforce sanctions removal deals. However, a dense information flow can facilitate sanctions removal only if the value the target places on resumed economic interactions with the sender is high. In other words, dense information flows need to be complemented by attractive economic inducements. Otherwise, the proposed sanctions relief cannot incentivize targets to credibly commit to make policy concessions and open themselves up to increased scrutiny of senders.

Linking Sanctions Removal and Bargaining Failures

Economic sanctions are foreign policy tools that one or more countries use to limit or end economic relations with a target country and to persuade that country to change one or more of its policies (Morgan, Bapat and Kobayashi, 2014; Hufbauer et al., 2007). The existing literature establishes that economic sanctions generate varying degrees of costs, either directly by freezing or limiting economic and financial transactions, or indirectly by creating market imperfections through fines on individuals and businesses, travel bans or increased uncertainty about the economic stability of the targeted country (Eyler, 2007; Hufbauer and Oegg, 2003; Dizaji and Bergeijk, 2013; Lektzian and Biglaiser, 2013). These imperfections may create immediate loss of economic efficiency and short-term costs of adjusting to new trade patterns, which in turn may risk reduction in future growth (Farmer, 2000). Moreover, these costs and market imperfections are often absorbed by private firms (Biglaiser and Lektzian, 2011). Additionally, existing research shows that sanctions destabilize leaders politically (Marinov, 2005; Escriba-Folch and Wright, 2010), give businesses a strong incentive to use criminal trade routes (Andreas, 2005; Early, 2011), cause more political violence (Allen, 2004), worsen human rights conditions (Weiss et al., 1997; Peksen, 2009; Lopez and Cortright, 1997), increase repression (Wood, 2008), contribute to the escalation of conflict violence (Hultman and Peksen, 2017) and reduce the level of democratic freedoms in target countries (Peksen and Drury, 2010).

While most analyses only examine short-term effects of sanctions, few analyze the effect of these costs over time. The literature on sanctions effectiveness focuses heavily on the target's behavior at the time of termination (Allen, 2009; Cortright and Lopez, 2002; Drezner, 2011; Lektzian and Souva, 2007). However, only a few studies examine how circumstances change over time in a sanctions episode and how success is achieved (Krustev and Morgan, 2011; Dorussen and Mo, 2001; Bolks and Al-Sowayel, 2000). Sanctions are time inconsistent for both the sender and the target. In other words, their preferences and bargaining positions change over the course of a sanctions episode. First, the target's preferences over its offensive policy might change during a sanctions episode. For instance, if the target of a human rights sanction experiences a leadership turnover and if the new leader has a democratization agenda, the human rights violations that used to be profitable for the target might cease to be desirable (McGillivray and Stam, 2004).

Alternatively, the value the target places on its behavior can remain the same; but the costs of pursuing the behavior might increase over time. If sanctions fail to immediately compel targets into compliance, the inefficiencies continue for extended periods of time. As sanctions endure, the accumulation of these costs might create incentives for senders and targets to negotiate over ending sanctions. The decision to end economic coercion not only reverses the inefficiencies created by sanctions, but also generates more wealth by resuming profitable economic interactions. Therefore, any negotiated settlement over ending sanctions and the subsequent resumption of economic transactions would allow the rival states to obtain the gains from resumed trade and achieve a Pareto-improving outcome. The changing political environment, the accumulated inefficiencies, and the desirability of preserving trade gains might force senders and targets to re-evaluate their policy positions, thus offering a possibility of sanctions removal.

Even if ending sanctions and achieving economic peace might become preferable over time, commitment and information problems pose barriers to successful negotiation (Fearon, 1995). As Powell (2004, 2006) demonstrates, adversaries are often unable to credibly commit themselves to following through on an agreement or may be incentivized to renege. The problem is exacerbated when the agreement makes one adversary more powerful in a way that will contribute to its future bargaining power (Fearon, 1996; Chadefaux, 2011; McCormack and Pascoe, 2015; Krainin, 2017). Any agreement reached over ending sanctions will provide the target state with greater access to resources through sanctions relief, thereby strengthening the target state's economy. The extent to

which the target's economy will become stronger in the post-sanctions period is conditional upon the extent to which sanctions were able to harm the target's economy. However, even in the case of minor cost sanctions, sanctions removal reverses market imperfections and eases doing business with the target country by providing confidence to third parties and the market. If the target's economy strengthens, this will undermine its incentives to honor its commitments to alter its behavior (Goemans, 2000; Leventoglu and Slantchev, 2007). On the contrary, it might create strong incentives for the target to exploit the deal by channeling the gains from sanctions relief into its foreign policy challenges. Therefore, removing economic sanctions require the rival states to overcome commitment problems. More specifically, the target needs to certify and credibly signal that it will not pursue its offensive behavior once sanctions are lifted and the sender must continuously enforce compliance (Schultz, 2010).

To overcome commitment problems created by sanctions relief and to successfully enforce sanctions removal deals, senders need to be informed about targets' compliance behavior. Not knowing if the target intends to alter its behavior in exchange for sanctions relief creates an obstacle for reaching sanctions removal deals. Moreover, not being able to acquire credible information about targets' behavior inhibits senders' ability to enforce the deal's terms. This link between monitoring and enforcement during sanctions removal processes can be exemplified by how Sierra Leone sanctions ended. The UN Security Council imposed sanctions on Sierra Leone in 1997, barring the supply of arms and petroleum products, in response to the atrocities by the Armed Forces Revolutionary Council junta during the Sierra Leone Civil War. The civil war was officially declared ended in 2002; however, sanctions remained in place for another eight years, and its scope has expanded to include restrictions on the import of rough diamonds from Sierra Leone.[9] The UN was concerned that sanctions relief prior to full disarmament may help non-government forces to mobilize and destabilize the country (Biersteker et al., 2018). To ensure the government's compliance, UN Peacekeeping and Peacebuilding missions were mandated to monitor disarmament and post-conflict transition, and served as a facilitator of sanctions removal by verifying full disarmament and peace. What prevented sanctions removal for 8 years was the uncertainty about the future of the country,

[9]UN Security Council Resolution 1306

and whether Sierra Leone can credibly commit not to channel the gains from sanctions relief into a future conflict.

Most work analyzes the two bargaining problems separately, isolating information or commitment problems, with a few exceptions (Wolford, Reiter and Carrubba, 2011; Bas and Schub, 2017). However, these problems interact, and complement one another. In the process of sanctions removal, asymmetric information becomes a source of commitment problems. Therefore, overcoming information problems is a prerequisite for overcoming commitment problems. Since target states have unilateral control over their policies and an ability to pursue their foreign policy challenges covertly, reaching deals and enforcing them necessitate overcoming information problems. If there is an expectation that the sender will not be able to overcome the problem of monitoring, targets cannot credibly commit to alter their behavior while enjoying the gains from sanctions relief. Therefore, reaching a successful sanctions removal bargain requires senders and targets to simultaneously overcome commitment and information problems.

This dynamic can be exemplified by the removal of decades-long sanctions on Myanmar. When Suu Kyi, an icon of democracy who was under house arrest for resisting Myanmar's military junta, won the elections in 2015 and became the country's civillian leader, the US perceived it as an indication that the government had made "substantial progress towards democratization."[10] Suu Kyi's victory was seen as a change in the preferences of Myanmar and an indication of the ability of the country to commit to improve its human rights conditions while receiving previously frozen government aid from the US. However, today, Suu Kyi is heavily criticized for her inaction for the country's brutal suppression of the Rohingya. At the time of removal, the U.S. was not fully informed about whether Suu Kyi can diminish the role of military in the country and the extent to which she can improve Myanmar's human rights practices. In other words, the U.S. lacked information on the extent to which the country can credibly commit to alter its behavior while enjoying the gains from sanctions relief and potentially overestimated the positive implications of Suu Kyi's victory.

As seen in the Myanmar case, overcoming information problems is often challenging. During sanctions removal negotiations, some targets might actually be sincere and willing to reverse their

[10]Harris, Gardiner. "Obama Lifts Some Sanctions Against Myanmar" (2016, December 2), *The New York Times*. Retrieved from: https://www.nytimes.com/2016/12/02/us/politics/obama-lifts-sanctions-myanmar.html

offensive behavior in exchange for sanctions relief. However, some others might be opportunistic and participate in sanctions removal negotiations in the hopes to use the gains from sanctions relief to advance their policies that initially triggered sanctions. Such opportunistic targets might also have incentives to misrepresent their true intentions at the negotiation table and indicate a false willingness to make policy concessions in exchange for sanctions removal. The key dilemma is that senders are often uncertain about whether the target is opportunistic and will exploit sanctions relief or is sincere and will make policy concessions.

Furthermore, detection of reneging on sanctions removal agreements and monitoring the extent to which targets are altering their behavior are not always possible. The possibility of escaping detection might incentivize targets to cheat and intensify commitment problems; thus, jeopardize sanctions removal (Chayes and Chayes, 1993; Marcoux and Urpelainen, 2013; Mitchell, 2002; Bednar, 2006). In the cases of nuclear proliferation, support to terrorism, or acquiring strategic material, the covert nature of the offensive behavior is evident. But even in the cases of human rights violations or one-sided violence, the uncertainty remains. Targets might commit to make concessions by signing a human rights treaty or passing domestic reform bills, but enforcement often remains uncertain. Even in cases where domestic violence is observed by the senders, the perpetrator of violence can be challenging to identify, as governments often deny their involvement, and blame the violence on non-government groups.

Senders' uncertainty about targets' intentions, coupled with the possibility that targets can get away with their non-compliance may lead sanctions to persist despite strong economic incentives to reverse their inefficiencies. Therefore, sanctions removal and achieving economic peace require rival states to ameliorate bargaining problems. More specifically, targets should certify their compliance and give senders reliable assurances that the deal's terms will be honored, and senders need to devise mechanisms to overcome the problem of monitoring.

The question of how to overcome bargaining problems is central to the international relations literature on conflict and cooperation. The role of third parties in assisting conflicting states has attracted significant scholarly attention. Specifically, the literature identifies IGOs as instrumental actors that alleviate information and commitment problems by mitigating uncertainty and increasing flow of information among members, reducing communication costs, and providing resources for enforcement (Abbott and Snidal, 1998; Lohmann, 1997; Axelrod and Keohane, 1985; Mitchell

and Hensel, 2007; Botcheva and Martin, 2001). Moreover, interactions through greater number of IGOs may lead to greater interest convergence and create increasing opportunities to exchange ideas and build trust (Johnston, 2001; Bearce and Bondanelle, 2007), regardless of the mandate of the IGO (Greenhill, 2010; Ingram, Robinson and Busch, 2005). Some IGOs can also serve as active information providers and monitor member states' actions and treaty compliance. Institutional connectedness can also create more channels for senders to link the issue under contention with another issue area that targets might prioritize over their offensive behavior (Haas, 1980; Lohmann, 1997).

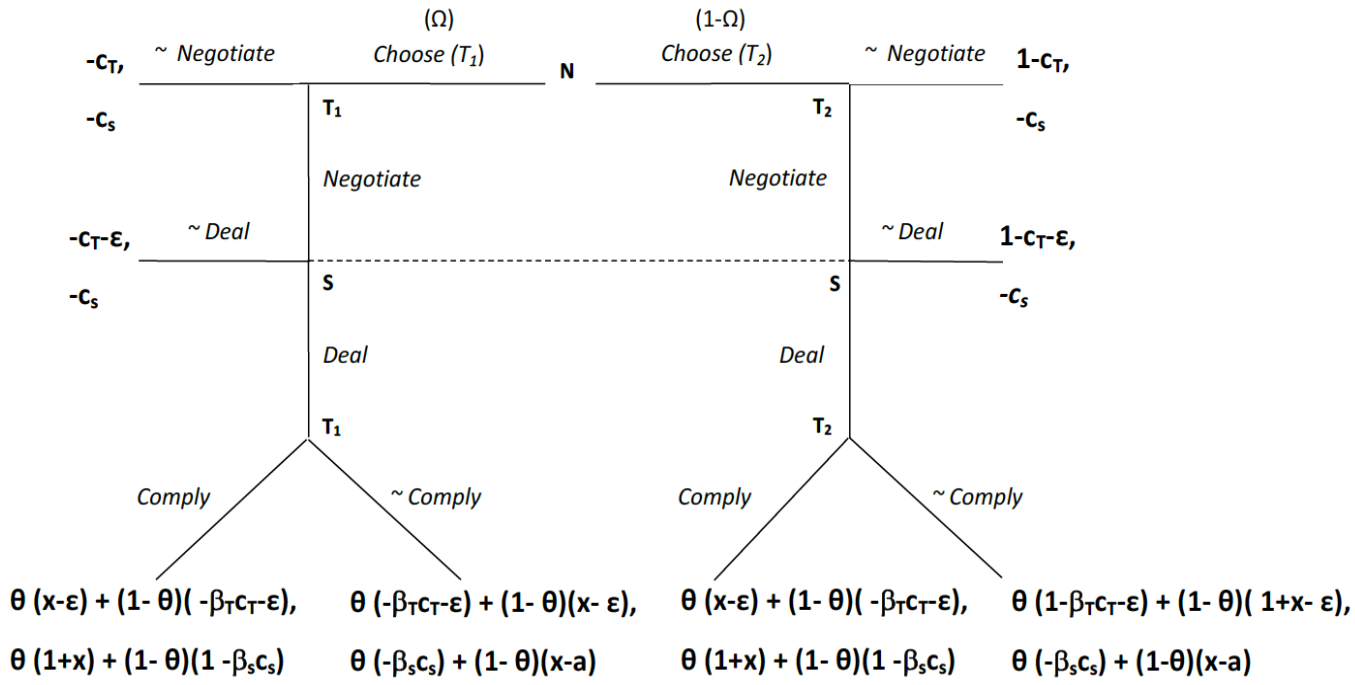
I argue that institutional connectedness creates formal and informal avenues for senders to gather information about targets' intentions at the negotiation table and their compliance behavior. The information available through these institutional channels might not be available to senders in the absence of such connectedness; therefore, joint institutions are key in ameliorating bargaining problems embedded in sanctions removal processes. Specifically, the information flow between senders and targets facilitated through IGOs enables senders to enforce the deal's terms (Fearon, 1998). If senders can assure continuous enforcement of the deal, this also induces target cooperation and discourages cheating. The increased possibility of detection will help targets to credibly signal their willingness to make policy concessions and increase the likelihood that they will participate in negotiations over sanctions removal only when they are sincere (Von Stein, 2005). To identify when institutional channels can help solve bargaining problems and facilitate sanctions removal, I now turn to the formal model.

Theory of Sanctions Removal

Figure 1 presents a simplified model of negotiations between a sender (S) and a target (T) over sanctions removal in exchange for policy concessions from T. Prior to the start of the game, T engages in a behavior that is offensive to S, such as providing support to terrorist organizations, violating human rights, or enriching uranium. T's behavior leads to sanctions imposition by S in order to convince T to reverse its policy. Over time, inefficiencies of economic sanctions accumulate for both S and T, and may also diminish T's ability to pursue its offensive behavior. Therefore, both countries have an incentive to negotiate ending sanctions and resuming mutually beneficial economic

transactions. The problem, however, is that S is uncertain about the extent to which T can credibly commit to alter its offensive behavior while enjoying the gains from sanctions relief.

Figure 3: Sanctions Removal Game



This situation can be modeled as a signaling game, where T has private information about its intentions to make policy concessions and the value it places on its policy. Nature begins the game by selecting the target's type. T_1 is the sincere type, which is not interested in continuing its offensive behavior. T_2, on the other hand, is the opportunistic type, which seeks to use gains from sanctions relief to pursue its offensive behavior. Assume that Nature chooses a sincere target (T_1) with probability Ω and an opportunistic target with probability $(1 - \Omega)$.[11] Formally, the underlying difference between the two types is the payoff they receive from their offensive policies. T_1 receives a payoff of 0 from both the continuation and the reversal of its policy.[12] This can be due to change in leadership in the target country or an economic or domestic shock. For instance, with the election of Nelson Mandela in South Africa in 1994, the target country stopped receiving benefits

[11] $\Omega \in [0, 1]$.

[12] Substantively, T_1's preferences change after the impositions of sanctions and its offensive behavior ceases to be an attractive policy.

for the apartheid policies that initially triggered sanctions. Similarly, the new regime embraced an antinuclear position and saw that the nuclear deterrent was a burden rather than a benefit Babbage (2004). Therefore, South Africa has become a target that does not receive positive utility from the policies that initially triggered sanctions.

T_2, conversely, receives a payoff of 1 for the continuation of its policy and 0 for its reversal. Substantively, this implies that T_2's preferences over its policies has remained the same since the imposition. Iraqi efforts to conceal its nuclear program in 1990s to circumvent the UN sanctions exemplify the preferences of T_2. Iraq was cooperating with the UN by allowing the inspectors in the country, while adopting deception techniques to be able to get away with its nuclear program. S, on the other hand, strictly prefers the reversal of T's offensive behavior. It receives a payoff of 0 if the offensive policy remains in place and 1 if it is reversed.

Following Nature's choice, $T_{(1,2)}$ decides whether to participate in negotiations with S over the reversal of its policy.[13] T's decision to negotiate serves as a signal of its willingness to alter its behavior in exchange for sanctions relief. Not participating in negotiations, on the other hand, is perceived as an indication that T is continuing the pursuit of its offensive behavior. If $T_{(1,2)}$ plays $\sim$ Negotiate, the game ends in the status quo characterized by imposed sanctions. This outcome produces a payoff of 0 for both T_1 and S. T_2, on the other hand, receives 1 for its policy. Sanctions also diminish each players' payoffs by $c_{(T,S)} \in [0, 1]$, capturing the economic inefficiencies and transaction costs of sanctions. Sanctions impose varying degrees of economic costs on both senders and targets and the $c_{(T,S)}$ parameter captures how costly sanctions are in a given sanctions episode.

If T participates in negotiations, this might be perceived as a weakness domestically. For instance, the U.S. perceived Iranian President Rouhani's declaration that Iran is ready for serious nuclear talks as an opportune moment for a nuclear deal; however, Iranian hardliners stiffly opposed such

[13]Once sanctions are imposed, senders introduce the negotiation option to the game. The main goal of sanctions imposition is to force targets to the negotiation table and bargain over ending sanctions in exchange for target concessions. Therefore, the sanctioning process inherently has a negotiation offer made by S. T's decision whether to Negotiate is essentially a response to this inherent negotiation offer.

negotiations.[14] The domestic cost of negotiations are represented as $\epsilon > 0$ and all of T's subsequent payoffs are diminished by ϵ.[15]

Table 1: Parameters and Ranges

Parameter	Interpretation	Range
Ω	S's prior belief that $T = T_1$	$\Omega \in [0, 1]$
$1 - \Omega$	S's prior belief that $T = T_2$	$\Omega \in [0, 1]$
ϵ	T's cost of participating in negotiations	$\epsilon > 0$
$c_{(T,S)}$	Economic inefficiencies of sanctions	$c_{(T,S)} \in [0, 1]$
x	Benefits of resumed economic interactions	$x > 0$
θ	Probability that S accurately detects T's behavior	$\theta \in [0, 1]$
$\beta_{(T,S)}$	The harshening costs of economic sanctions	$\beta > 1$
a	S's cost for failing to verify T's behavior accurately	$a \in [0, 1]$

If $T_{(1,2)}$ plays Negotiate, the game moves to S's decision node. S either agrees to a sanctions removal deal with T or ignores T's signal. The information set indicates that S is uncertain about whether T is sincere or opportunistic. If S rejects to make a deal with T, negotiations fail, sanctions remain in place, and the game ends with the status quo maintained. If S agrees to a deal with T, sanctions removal and the resumption of economic interactions are conditional upon the verification of T's policy concessions.

At its final decision node, $T_{(1,2)}$ plays either Comply or $\sim$ Comply, where compliance indicates the reversal of its offensive behavior. Sanctions removal and the resumption of economic interactions are conditional upon the verification of T's policy concessions. S detects T's behavior accurately with probability θ and fails to do so with probability $(1 - \theta)$.[16] With probability θ, S removes sanctions against complying targets and resumes trade, while keeping sanctions in place against non-complying targets. With probability $(1 - \theta)$, the verification process either incorrectly reveals a false positive and leads to the punishment of a complying target, or reveals a false negative and leads to sanctions removal against a non-complying target. Substantively, higher levels of θ indicate greater information flow between S and T, thus a higher likelihood of detecting T's behavior accurately.

[14] Erdbrink, Thomas."Iranian General Criticizes U.N. Resolution on Nuclear Deal" (2015, July 20), *The New York Times*. Retrieved from: `http://www.nytimes.com/2015/07/21/world/middleeast/iranian-general-criticizes-un-resolution-on-nuclear-deal.html?_r=0`

[15] Allowing negotiations to be costless ($\epsilon = 0$) does not change the model's implications, but creates a number of redundant equilibria, by making T indifferent between $\sim$ Negotiate and $\sim$ Deal outcomes.

[16] $\theta \in [0, 1]$.

If T plays Comply and makes policy concessions, S verifies this behavior with probability θ, lifts sanctions and resumes economic interactions with T. The benefits of resumed interactions are conceptualized as positive-sum, such that T and S receive x.[17] The x parameter captures the value T places on the sanctions relief. Therefore, T receives $x - \epsilon$, accounting for the reversal of the policy and negotiation costs. S receives 1 for the policy reversal, plus x for the resumed interactions.

If T complies, but S fails to verify this behavior with probability $1 - \theta$, sanctions remain in place and they can potentially get costlier. This is represented by $\beta_{(T,S)} \geq 1$. If S thinks that the target is still pursuing its offensive behavior, what T is punished for is not only its offensive behavior, but also its participation in negotiations in bad faith and with no intention to comply. This might also lead T to experience a costly deterioration of its reputation in future negotiations and trigger other tangible costs such as foreign aid cuts or military escalation. Harshening of sanctions is how S enforces sanctions removal deals. $\beta = 1$ indicates a case where S does not have the ability to enforce the deal and the costs of sanctions remain the same even after discovering T's non-compliance. On the other hand, higher levels of β indicate a higher ability to enforce the deals' terms by punishing non-compliance.

If T plays $\sim$ Comply and continues its offensive behavior, S detects this accurately with probability θ and punishes T with harsher sanctions.[18] If S fails to detect T's non-compliance with probability $(1 - \theta)$, sanctions are lifted and T can pursue its offensive behavior while enjoying the gains from sanctions relief. The expectation that there is a possibility to get away with its offensive behavior and to enjoy sanctions relief despite its non-compliance create commitment problems for T_2. While sanctions relief (x) is the only benefit that T_1 gets for this outcome, T_2 gets a payoff of 1 for its policy, along with the gains of resumed trade with S (x). This outcome presents the worst case scenario for S, since its payoff is diminished by the additional costs of being cheated on without being able to detect (a). On the other hand, it represents the best case scenario for T_2.

[17] Allowing x to vary for T and S does not alter the implications of the model.

[18] It can be argued that it is easier to accurately verify the behavior of T_1 than the behavior of T_2. Capturing this requires me to assign different probabilities to verify the behavior of each T. Adding this extra complication does not alter the main results of the model. More importantly, the solution establishes that the amount of θ required to induce T_2's compliance is greater than the amount of θ required to induce T_1's compliance. Therefore, the theoretical expectation that different probabilities need to be assigned for detecting the behavior of both types of T is already accounted for in the solution of the model.

Equilibrium Results

The signaling game is solved by using Perfect Bayesian Solution Concept. This section presents the main insights behind the solution and identifies the equilibria that are of particular interest. Formal details are presented in Appendix A.

Under complete information on T's type, S always prefers to make a deal with the sincere target (T_1) and keep sanctions in place against the opportunistic target (T_2). However, senders lack information on T's type. The solution identifies the conditions under which targets can credibly commit to a deal and senders end sanctions in this uncertain environment. I begin by considering T's choice between Comply and $\sim$ Comply and identify the amount of θ that guarantees compliance of each type of T.

T_1 is the sincere type that does not receive any positive utility from its offensive behavior, but this does not guarantee its policy reversal. Since there is a chance that S will fail to verify T's compliance and keep sanctions in place despite T's compliance, T_1 requires assurances that its compliance will be rewarded with sanctions relief. T_1 makes policy concessions only if the sender's ability to verify compliance is sufficiently high. Formally, T_1 complies if $\theta(x-\epsilon)+(1-\theta)(-\beta_T c_T-\epsilon) > \theta(-\beta_T c_T-\epsilon)+(1-\theta)(x-\epsilon)$, which simplifies to:

$$\theta > \frac{1}{2} = \hat{\theta}_{T1} \tag{1}$$

T_2, the opportunistic type, prefers to use sanctions relief to pursue its offensive behavior and plays Comply only if the sender has a high likelihood of detecting and punishing its non-compliance. Formally, S can induce T_2's compliance if:

$$\theta > \frac{1}{2} + \frac{1}{2(\beta_T c_T + x)} = \hat{\theta}_{T2} \tag{2}$$

Both types of T require some level of θ in order to make policy concessions in exchange for sanctions relief. However, the level of θ required to induce compliance is higher for the opportunistic type than it is for the sincere type ($\hat{\theta}_{T2} > \hat{\theta}_{T1}$). Opportunistic targets gain positive utility from the continuation of their behavior; therefore, convincing them to reverse their policies requires the likelihood of detection to be substantially higher. However, sincere targets do not gain any positive utility from

their offensive behavior and therefore, their preferences are aligned with the sender. Under these circumstances, sincere targets are willing to reverse their policies for a relatively lower value of θ.

Empirically, higher values of θ correspond to denser and more accurate information flow between the sender and the target. On the contrary, lower values of θ indicate that there is a weaker information flow between the rival states, and S has a low likelihood of accurately verifying T's compliance behavior. To ensure that the target will make policy concessions in exchange for sanctions relief, S seeks to verify T's compliance behavior and obtain reliable assurances that the deal's terms will be honored. However, not all senders are equally equipped to gather accurate compliance information and the extent to which they will have access to information on T's policies depends upon the density of information flow between S and T. In the following subsections, I characterize the solution based on three cases: low information flow between S and T ($\theta < \hat{\theta}_{T1}$), moderate information flow between S and T ($\hat{\theta}_{T1} < \theta < \hat{\theta}_{T2}$), and dense information flow between S and T ($\theta > \hat{\theta}_{T2}$).

Case 1: Low Information Flow between S and T ($\theta < \hat{\theta}_{T1}$)

When θ is low, S has very limited sources of information on the intentions and the behavior of T. The discussion above establishes that under these circumstances, both T_1 and T_2 play $\sim$ Comply. T_1 does not comply due to its worry about facing sanctions despite its compliance. T_2 does not comply to get away with its offensive behavior and reap the gains from sanctions relief. However, there are still some cases in which the sender prefers end sanctions despite the expectation that T will keep pursuing its offensive behavior. S plays Deal if the economic costs of sanctions, c_S, is relatively high. In these cases, S may prefer to end sanctions even against non-complying targets in order to avoid causing further harm to its own economy.[19]

Case 2: Moderate Information Flow between S and T ($\hat{\theta}_{T1} < \theta < \hat{\theta}_{T2}$)

Even if c_S is relatively lower in most cases and S can afford keeping sanctions in place, it still has incentives to negotiate a sanctions removal deal. A successful deal not only reverses the inefficiencies of economic sanctions accumulated over time, but also generates more wealth by resuming profitable

[19]Empirically, however, sanctions that generate major or severe costs to the sender are extremely rare ($<1\%$) (Morgan, Bapat and Krustev, 2009*b*). Therefore, I am substantively interested in cases where senders do not have strong economic incentives to risk lifting sanctions against non-complying targets. In Appendix A, I present an additional test excluding major/severe cost sanctions to the sender.

economic interactions. To ensure that the target will make policy concessions in exchange for sanctions relief, S seeks to verify target's compliance behavior and obtain reliable assurances that the deal's terms will be honored.

Moderate levels of information flow between S and T are sufficiently high to induce T_1's compliance, but not T_2's. Increasing the level of θ from low to moderate improves the sender's ability to accurately verify T's behavior; however, it does not enable S to differentiate between T_1 and T_2. On the contrary, moderate levels of information flow create incentives for T_2 to misrepresent its true type and mimic T_1. In these cases, T_2 participates in negotiations with no intention to make policy concessions, and plays $\sim$ Comply. If opportunistic targets can successfully misrepresent their true type, the outcome is characterized by S's worst case outcome. However, the solution demonstrates that senders can choose to remove sanctions despite the uncertainty about T's intentions and the opportunistic target's incentives to misrepresent its true type.

First of all, as a - the additional costs S suffers for failing to catch T's non-compliance- increases, the probability of sanctions removal decreases. In other words, if the disputed issue is salient for S and its citizens, and if the sender government is expected to be held accountable by its populace if sanctions removal turns out to be a mistake, S becomes less likely to take the risk of ending sanctions when the information flow between S and T is at moderate levels. Second, higher levels of c_S, sanctions costs incurred by the sender, incentivize senders to end sanctions in order to avoid causing further harm to its own economy.

In sum, there is still a chance of ending sanctions and resuming economic interactions in equilibrium, even if the moderate levels of information do not allow S to accurately differentiate between T_1 and T_2. Under these circumstances, having a high enough θ to provide assurances to T_1, and low enough θ to enable T_2 to mimic T_1 by participating in negotiations leads to sanctions removal in equilibrium.

Case 3: Dense Information Flow between S and T ($\theta > \hat{\theta}_{T2}$)

Lastly, I turn to cases where there is a dense information flow between S and T, which allows S to detect T's actual behavior with a higher probability. Under these circumstances both Ts play Comply, but for different reasons. The availability of dense informational channels can provide assurances to T_1 that its compliance will be verified and rewarded. On the other hand, dense informational

channels will induce T_2's compliance because of the expectation that its non-compliance will be detected and punished. Knowing that both Ts will comply, S always prefers to make a deal over ending sanctions.

Interestingly, however, S's willingness to make a deal with T is not sufficient for economic peace in equilibrium. Sanctions removal initially requires T to participate in negotiations. Therefore, whether targets will Negotiate and open themselves up to scrutiny of senders when the likelihood of accurate verification is high is the key question. For T to be willing to negotiate over its policies when θ is high, the perceived benefit of resumed economic interactions must also be high. Otherwise, T chooses to stay out of negotiations and sanctions persist. Formally, if θ is high ($\theta > \hat{\theta}_{T2}$), T_1 will Negotiate only if:

$$x > \frac{(1-\theta)(\beta_T c_T) + \epsilon - c_T}{\theta} = x^*_{T_1} \tag{3}$$

T_2, on the other hand, will Negotiate only if :

$$x > \frac{1 + (1-\theta)(\beta_T c_T) + \epsilon - c_T}{\theta} = x^*_{T_2} \tag{4}$$

Note that the amount of x that creates incentives for T_2 to Negotiate is higher than the amount of x required to convince T_1 to Negotiate. If the value T places on resumed economic interactions with S is low ($x < x^*_{T_1}$), both types of T will play $\sim$ Negotiate and quit the game at their first node. Even if θ is high, T_1 will not see the sanctions relief worthy of the risk of being faced with harsher sanctions, no matter how small the risk is. T_2, on the other hand, chooses not to participate in negotiations in order to escape from the scrutiny of S, and being forced to comply. If the value T places on resumed economic interactions with S is moderate ($x^*_{T_1} < x < x^*_{T_2}$), it will be high enough to convince T_1 to play Negotiate, but not high enough for T_2 to be willing to participate in negotiations and give up its offensive behavior. Therefore, a separating equilibrium forms where only the sincere target participates in negotiations. For the cases where the value T places on resumed economic interactions is high ($x > x^*_{T_2}$), both types of T will negotiate a deal with the sender and make policy concessions in exchange for attractive sanctions relief.

In sum, the model reveals that dense information flow between S and T is necessary to solve bargaining problems embedded in sanctions removal processes but not sufficient to facilitate sanctions

removal. Dense information flow increases the likelihood of sanctions removal only if the efforts are complemented with attractive economic inducements. If the proposed sanctions relief is not attractive to the target, high levels of information flow between senders and targets can lead to the persistence of inefficient sanctions by forcing the opportunistic types to stay out of negotiations with the sender. This illustrates an interesting dynamic where increased information is necessary but not sufficient to achieve economic peace.

Empirical Implications

The model generates interesting empirical implications about when sanctions end and economic interactions resume. Sanctions removal is more likely if the sender is connected to the target through dense institutional channels that facilitates information sharing. These channels can inform senders about targets' compliance behavior, thereby enabling senders to enforce sanctions removal deals. Senders' confidence that the targets' non-compliance will be detected and punished facilitates sanctions removal in two ways. First, it provides assurances to the sender, and second, it induces target cooperation and discourages cheating.

Even if dense information flow between senders and targets mitigate bargaining problems embedded in sanctions removal processes, it fails to guarantee sanctions removal. Dense information flows can facilitate sanctions removal only if the increased likelihood of non-compliance detection is complemented by attractive economic inducements. If the target does not place a high value on sanctions relief and can offset the costs of sanctions through alternative means, targets will always prefer to stay out of negotiations, knowing that the sender has a high likelihood of detecting and punishing its behavior. In a case like North Korea, where the country's revenue stream remains intact due to assistance from and continued trade with third countries such as China, sanctions relief cannot incentivize the leadership to come to the negotiating table. For sanctions to end, dense information flow between senders and targets need to be complemented by a high value placed on sanctions relief by targets, which requires sanctions to be able to hurt the target in the first place.

Hypothesis 1 (a): Dense information flows between senders and targets increase the probability of sanctions removal, but only if the target places a high value on sanctions relief.

Hypothesis 1 (b): Dense information flows between senders and targets decrease the probability of sanctions removal in the absence of attractive sanctions relief.

Data and Research Design

I test my hypotheses with a sample of cases drawn from the Threats and Imposition of Economic Sanctions (TIES) dataset for the years between 1946-2010 (Morgan, Bapat and Kobayashi, 2014).[20] Each observation in the TIES dataset corresponds to a sanctions episode with a sender, a target, a start date, and an end date. I transform the dataset so that each observation is expanded into a series of dyad-years for the duration of each sanctions episode, starting on the imposition year and ending on the removal year. There are 232 unique security-related sanctions episodes with an average duration of 5.7 years.[21] The unit of analysis is directed-dyad-year, where the first actor is the sender and the second actor is the target.

To better match the empirical analysis with my theoretical model, I build my dataset based on the following criteria: First, if a sanctions episode has multiple senders, "primary sender" identified in the TIES dataset, is coded as the sender. A primary sender is coded as the state that proposes sanctions or is responsible for mobilizing other states to initiate sanctions. Therefore, primary senders play a central role in the decision to keep or lift economic sanctions.[22] If however, the sole target or the sender was an intergovernmental organization, the cases are excluded. TIES Dataset records only 8 security-related sanctions imposed primarily by an international organization and only 3 security-related sanctions imposed where the target is an international organization. This restriction allows me to maintain the dyadic structure of the data where both the sender and the target countries are identified in COW's State System Membership Dataset, without significantly restricting my sample. Second, I only analyze sanctions cases where the issue under contention is security-related.[23] Sanctions imposed solely due to the target's trade practices are potentially distinct and less severe

[20] TIES Datasets codes imposed sanctions between the years 1945-2005 and codes removal until 2013. Due to the availability of data on my independent variables, my dataset covers the years 1946-2010.

[21] This indicates that cases such as the Cuban embargo and South African sanctions are relatively rare.

[22] However, I control for whether the sanctions were multilateral.

[23] Sanctions imposed for containing political influence and military behavior, destabilizing regime, demanding the release of citizens or property, solving territorial disputes, denying strategic material, retaliating for alliance choices, demanding human rights improvements, ending weapons proliferation, terminating support of non-state actors and punishing drug trafficking are considered as security-related.

(Peksen and Peterson, 2015; Drezner, 2003). Moreover, they are often limited in their ability to harm the target's economy as a whole and do not create the same degree of commitment problems for targets. Lastly, I exclude the cases where sanctions are imposed and removed in the same year. Analyzing these short-lived sanctions risks blurring the differentiation between the decision to lift and the decision to impose sanctions. However, Appendix A provides robustness check results with their inclusion.[24]

I also account for the cases with no end dates in the TIES dataset. For instance, the US imposed sanctions on Albania in 1949 to terminate Albania's support for non-state actors. The TIES dataset does not code the end date of this episode, but provides information on the year of the last reported incident (*ongoing as of year*), which is 1951. Assuming that the case is still ongoing and including all dyad-years from 1949 to 2010 would be misleading. I address this problem using two alternative coding decisions. First, I include all dyad-years between the imposition year and the year after the "ongoing as of" year and code the end year as the year after the last recorded incident. For example, in the US-Albania case, I include dyad-years of 1949, 1950, 1951 and 1952, and code the end year as 1952. Second, instead of coding the year after the last recorded incident as the end year, I code the case as ongoing. For the US-Albania case, I include dyad-years of 1949, 1950, 1951 and 1952, and code the sanctions removal dependent variable as 0 for 1952. The results obtained using the two different coding decisions are very similar. Below I present the findings obtained using this first coding decision, and I present the results obtained using the second decision in Appendix A.[25]

The dependent variable is binary, capturing whether or not sanctions are lifted in a given year. It is coded as 0 if sanctions are kept in place and 1 if they are lifted. The data has strings of 0s for each sanctions episode, ending with a 1 at the year of sanctions removal. The instances of sanctions removal accounts for 15% of the dataset. Since the dependent variable is binary, I use probit regression.[26] I cluster standard errors around the target state to control for potential non-independence by targets. To account for the time dependence in the data, I use cubic polynomial approximation (Carter and Signorino, 2010) by adding the duration of the dyads, its squared and

[24]There are 77 such cases in my sample, and with their inclusion, the results remain the same.

[25]I compute all robustness check results presented in Appendix A using both coding decisions separately.

[26]Appendix A presents the results from a rare events logistic regression, following King and Zeng (2001), to ensure that the low frequency of 1s in the dependent variable is not driving the results.

cubed term as regressors.[27] Lastly, in addition to the probit model, I utilize a Cox proportional hazards model, where the dependent variable is the count of years until sanctions end in a given episode. Due to space restrictions and the relative ease of interpreting the effect of interaction terms in probit models, I present the probit model's results below and duration analysis results in Appendix A.

Key Explanatory Variables

The two key factors that influence when sanctions end are the sender's likelihood of verifying the target's behavior accurately (θ) and the value the target places on sanctions relief (x). I hypothesize that sanctions are more likely to be lifted if there is dense information flow between the sender and the target, but this relationship holds only if the target places a high value on sanctions relief.

I conceptualize θ as the extent to which the sender has formal and informal connections to the target through joint institutions. The more countries interact with one another through institutions, the denser the information flow between them becomes. To operationalize θ, I use a count of IGOs that the sender and the target are jointly a member of in a given year, using COW's International Organizations Dataset (Pevehouse, Nordstrom and Warnke, 2004). *Joint IGO Membership* ranges from 0 to 72,[28] with higher values representing denser informational flow between the sender and the target, thus a higher likelihood of detecting targets' behavior accurately.

I conceptualize x as the attractiveness of sanctions relief and I measure it by accounting for the extent to which the target's economy is harmed by sanctions in the first place. If the target can maintain its profitable trade interactions while being under sanctions, the target is not expected to value sanctions relief. On the contrary, if the target's trade volume is shrinking under sanctions, the value it places on sanctions relief is expected to be higher. To capture this dynamic, I created Δ *in T's Trade Volume* variable by measuring the difference between the target's total trade volume the year prior to sanctions imposition and in any given year under sanctions, using COW's Bilateral Trade Dataset (v3.0) (Barbieri and Keshk, 2012). This variable ranges from -5 to 53 (in current US 10 billion dollars); with negative values indicating targets' trade losses under sanctions and

[27] The results obtained with cubic splines are presented in Appendix A (Beck, Katz and Tucker, 1998).

[28] Histogram of the variable is presented in Appendix A.

positive values indicating increases in trade volume despite sanctions.[29] The literature establishes how the target's ability to adopt new trade partners (McLean and Whang, 2010), or engage in sanctions-busting activities (Early, 2015) influence sanctions effectiveness; thereby influencing the value targets place on sanctions relief. Therefore, instead of accounting for the change in bilateral trade flows between the sender and the target, I account for the change in targets' total trade flow over time. To test my hypotheses, I interact *Joint IGO Membership* and Δ *in T's Trade Volume*, and add both variables separately to the model as regressors.

A potential concern can arise if Δ *in T's Trade Volume* is picking up on global trends in trade levels over time, instead of target-specific trade changes. This can be especially problematic for long-lasting sanctions. Therefore, I create a new variable by standardizing Δ *in T's Trade Volume* relative to the changes in yearly mean of global trade. I calculated the deviations of target's trade change from the mean of the global trade change in the same time period. Instead of measuring the target's trade volume changes relative to its own trade volume in the year prior to sanctions imposition, the adjusted variable measures the difference between targets' trade volume and the mean of the global trade over the course of a sanctions episode, taking the value the year prior to sanctions imposition as the baseline. The results obtained using this adjusted variable are very similar to the results obtained using Δ *in T's Trade Volume* and are presented in Appendix A.

Control Variables

I further include several control variables that may explain sanctions removal. First, I include *Multiple Issues*, which is coded as 1 if there are multiple issues under contention for a given episode, and 0 if there is only one.[30] Sanctions episodes involving multiple issues can be more contentious and harder to end than episodes over a single issue. Similarly, I include *Multiple Senders*, which is coded as 1 if TIES dataset records more than one sender for an episode, and 0 for unilateral episodes. Multilateral sanctions is expected to be more persistent than unilateral sanctions since the removal decision often requires consensus among senders.

[29] As expected, the frequency of targets whose economy grows significantly under sanctions is low. See Appendix A for robustness checks to ensure that the results are not driven by the distribution of this variable.

[30] Around 31% of the unique sanctions episodes in the dataset have multiple issues under contention.

I also account for the target's trade dependence to the sender, using the following formula for the year prior to sanctions imposition: *(T's exports to S + T's imports from S) / (T's exports + imports)* (Barbieri and Keshk, 2012). *Trade Dependence* is a continuous variable between 0 and 1 that captures the ratio of the target's trade volume with the sender to its total trade volume prior to sanctions imposition. Lower levels of trade dependence is indicative of the target's ability to find alternate trading partners while under sanctions. Therefore, higher levels of trade dependence to the sender is expected to facilitate sanctions removal.

Fourth, I add *GDP Ratio (per capita)*, capturing the relative economic power within the sender-target dyad, taken from Gleditsch (2002). Lastly, I include a measure of foreign policy similarity between the sender and the target, using S-scores, assembled from UN General Assembly votes (Voeten, Strezhnev and Bailey, 2009). The variable ranges from -1 to 1, where higher values indicate more similar interests. Joint IGO membership can indicate political preference proximity between senders and targets, and the inclusion of the *Foreign Policy Similarity* variable allows me to ensure that the results are not driven by the reasons why countries might join the same set of IGOs in the first place.

Results

Model 1 in Table 2 reports the results of the baseline model capturing the effect of the interaction term on the probability of sanctions removal. Model 2 presents the full model, including all of the explanatory and control variables. The theoretical model predicts that the probability of sanctions removal is higher if there is a denser information flow between senders and targets, and this relationship holds only if the value the target places on sanctions relief is high. The coefficient of *Joint IGO Membership* is positive and statistically significant in both models, indicating that the probability of sanctions removal is higher in cases with denser sender-target connectivity through institutional channels. The coefficient on the interaction term is negative and statistically significant, which indicates the decreasing effect of joint IGO membership on the probability of sanctions removal as the target's trade volume increases under sanctions.

While the results presented in Table 2 are informative, they are limited in their ability to portray the substantive effects of joint IGO membership on the probability of sanctions removal for the

Table 2: Probit: Sanctions Removal

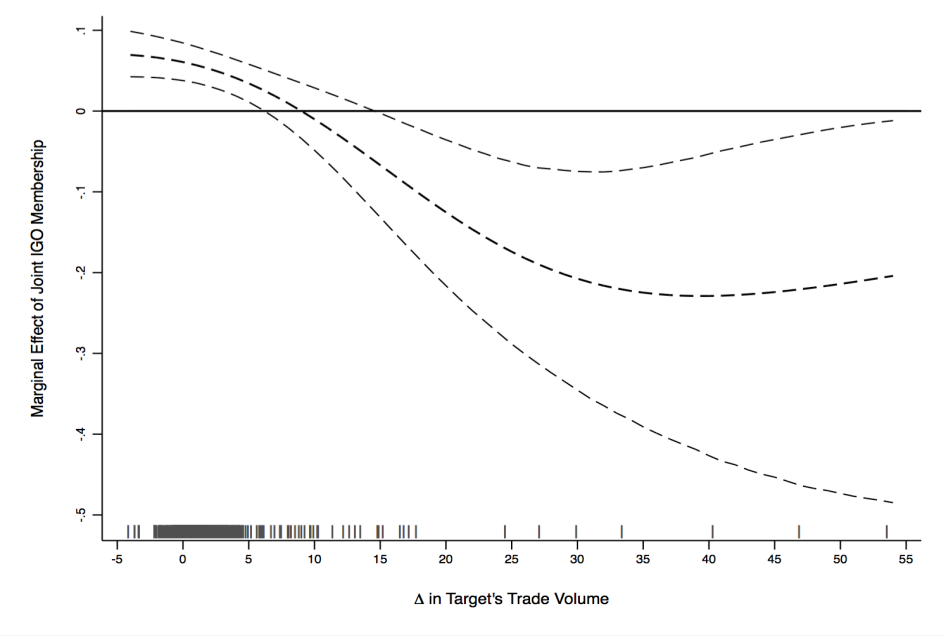
	M1: Baseline	M2: Full Model
Joint IGO Membership	0.015**	0.021***
	(0.00)	(0.01)
Δ in T's Trade Volume	0.125***	0.138***
	(0.03)	(0.04)
Joint IGO Membership x Δ in T's Trade Volume	-0.002*	-0.003**
	(0.00)	(0.00)
Trade Dependence		-0.750*
		(0.37)
Multiple Issues		-0.231*
		(0.11)
Multiple Senders		-0.005
		(0.12)
Foreign Policy Similarity		0.180
		(0.13)
GDP Ratio (per capita)		0.196
		(0.35)
Constant	-1.761***	-2.109***
	(0.20)	(0.56)
N	1083	795
Log L	-413.5	-308.9

- Estimates are derived from a probit model with robust s.e. clustered on the target state (in parenthesis).
- Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
- Temporal controls are omitted. (The full results are presented in Appendix A.)

relevant values of Δ *in T's Trade Volume*. To interpret the results visually, Figure 4 presents the marginal effects of *Joint IGO Membership* across the observed range of Δ *in T's Trade Volume*. The x-axis represents the observed range of the change in target's trade volume, in current US 10 billions of dollars. The variable captures the difference between the target's total trade volume in a given year under sanctions and the year before sanctions imposition. Negative values correspond to cases where targets experienced trade losses under sanctions, and positive values correspond to cases where targets increased their trade volume, despite being under sanctions.

The solid dashed line shows how the marginal effect of *Joint IGO Membership* changes as the Δ *in T's Trade Volume* increases. The 95% confidence intervals drawn around this line determine whether this effect is significant. The rug plot above the x-axis portrays the frequency distribution of the Δ *in T's Trade Volume* variable. The cases in which targets' trade volume grows significantly under sanctions are not very common; however, the results are still substantively meaningful. There are 68 dyad-years in which target's trade volume change is greater than 5, which accounts for 4.6% of the dataset. I address the implications of this and present robustness check analysis in Appendix A.

Figure 4: Marginal Effects of Joint IGO Membership on the Probability of Sanctions Removal



The effect of joint IGO membership is significant for all the values of trade volume change where the upper and the lower bounds of the confidence interval are both below or above the zero

line. The plot indicates that, if the target's total trade is shrinking under sanctions, higher levels of information flow between the sender and the target significantly increases the probability of sanctions removal. The results also hold if the target's total trade remains the same or is only minimally higher than the year before sanctions imposition. Substantively, this demonstrates that joint institutional membership and the information that is available to senders through these institutional channels facilitate sanctions removal, but only if the value the target places on resumed interactions with the sender is high. In other words, dense information flow between the rival states can increase the likelihood of sanctions removal if sanctions were able to harm the target's trade levels initially.

If, however, the target's trade volume grows in spite of sanctions, the direction of the effect changes, and the joint IGO membership variable starts to have a statistically significant reductive effect on the probability of sanctions removal. This confirms Hypothesis 1(b). Targets that can offset the costs of sanctions through alternate trade partners do not place a high value on the proposed sanctions relief. Under these circumstances, they are discouraged from entering into negotiations with senders. Interestingly, high levels of information flow between senders and targets can lead to the persistence of economic sanctions, if the efforts are not complemented by attractive sanctions relief.

The results also reveal other interesting insights. The negative and statistically significant coefficient of *Trade Dependence* is against my initial expectations. The results show that targets' high levels of trade dependence to the sender decreases the likelihood of sanctions removal. Sanctions are initially imposed when targets stand firm against senders' demands. If targets choose to stand firm despite their high levels of trade dependencies on the sender, they are more likely to be resolute and their foreign challenges are more likely to be salient. Under these circumstances, those sanctions episodes might be persistent. The model also shows that the coefficient for *Multiple Issues* is negative and statistically significant, indicating that episodes that are imposed due to multiple different policies of the target are harder to end. However, the same effect does not exist for the cases where there are multiple senders. I expected to see that sanctions episodes are less likely to be lifted if the removal decision requires an agreement among multiple participating senders. Even if the sign of the relationship is in the expected direction, the results show that multilateral sanctions are not harder to end than unilateral sanctions.

Conclusion

Sanctions onset and when such coercive efforts can induce target concessions have received ample scholarly attention. However, the questions of how sanction effectiveness is achieved and how rival states can transition from a state of economic conflict to a state of economic peace are often blackboxed in existing theories. By shifting the theoretical focus to the negotiations between senders and targets over ending sanctions, I identify the key challenges that prevent rival states from achieving economic peace and the conditions under which increased information can help them overcome these challenges.

This chapter argues that commitment problems faced by targets, coupled with the sender's uncertainty about how the target will behave once sanctions are lifted, are the key challenges to ending sanctions. I argue that senders and targets can achieve economic peace under two conditions: when targets can credibly signal their willingness to alter their behavior in exchange for sanctions relief and when senders have reliable assurances that the deal's terms will be honored and any target deviation will be detected. I examine the role of IGOs as facilitators of information provision in sanctions removal processes. The theoretical model and the empirical findings demonstrate that sanctions are more likely to be lifted if senders can gather accurate information on targets' behavior through institutional channels, which then enables the enforcement of sanctions removal deals. The results suggest that senders need to keep the diplomatic and institutional channels open with the target state even when the relations are tense and sanctions are in place.

I show how information and commitment problems complement one another and solving information problems is a prerequisite of solving commitment problems. Such information flows provide assurances to the sender, minimize the risks associated with strengthening the target with sanctions relief, and allow targets to certify their willingness to cooperate, once they make a deal. Moreover, I show that, for this mechanism to work, senders should be able to complement their efforts by attractive sanctions relief. This requires senders to be able to harm the targets' economy in the first place as a way to gain leverage during sanctions removal negotiations. If targets do not place a high value on the proposed sanctions relief, they will not have an incentive to open themselves up to the scrutiny of senders, and might choose to stay out of negotiations over ending sanctions.

CHAPTER 3: WHEN DO SANCTION RECUR?

The year 2016 was marked by the removal of decades long sanctions against Cuba, Iran, and Myanmar. These reconciliations have been years in the making and products of lengthy and thorough negotiations. However, in 2017, only a year after their removal, and shortly after the inauguration of President Trump, we have witnessed new sanctions against these three countries. In October 2017, President Trump announced his decision to de-certify the Iranian nuclear deal. In addition to the threat of new nuclear sanctions, he also announced the imposition of new terrorism related sanctions on Iran. A month later, the U.S. government restricted travel to Cuba, expelled 15 Cuban diplomats, and imposed sanctions targeting individuals and entities in Myanmar that are believed to be affiliated with the military operation against the Rohingya people.

The sudden foreign policy shifts in these three high-profile sanctions cases raise the question: Why do economic sanctions recur? One explanation can be the concerns about the target's behavior in the post-sanctions period. Senders can initiate new sanctions if the target pursues an offensive behavior following sanctions removal. President Obama's efforts to normalize relations with Cuba, Iran, and Myanmar partially depend on the expectation that these countries would respond positively to diplomacy with time. However, since the removal of sanctions, the Castro government has failed to implement any democratic reforms. The Iranian government is reported to be in compliance with the restrictions on their nuclear activities by the IAEA; however, they have pursued confrontation with the U.S. in other areas, such as developing ballistic missiles and sponsoring terrorism. And the Burmese military, with little resistance from the nations' democratically elected leader who was instrumental in Obama's decision to lift sanctions, have engaged in what UN officials have condemned as ethnic cleansing against the Muslim Rohingya minority group in the country.[31]

Alternatively, senders' decision to initiate new sanctions can be motivated by their domestic politics, instead of being a reaction to the target's behavior. The recent instances of sanctions

[31] Cumming-Bruce, Nick. "Rohingya Crisis in Myanmar Is Ethnic Cleansing, U.N. Rights Chief Says" (2017, September 11), *The New York Times*. Retrieved from: https://www.nytimes.com/2017/09/11/world/asia/myanmar-rohingya-ethnic-cleansing.html

recurrences by the U.S. can also be seen as efforts by President Trump to dismantle President Obama's achievements and legacy in international affairs and to differentiate his foreign policy agenda from his predecessor. In fact, Ben Rhodes, Obama's former deputy national security adviser, stated that "the organizing principle for how President Trump approaches foreign policy appears to be, in part, trying to look like he's doing the opposite of his predecessor."

In this chapter, I present two plausible explanations for when sanctions recur. First, I develop a strategic argument, which states that sanctions recur due to concerns about the target's behavior in the post-sanctions period. The alternative explanation is that sanctions re-occurrence is motivated by the domestic politics of the sender country. After testing these two competing hypotheses, I find support for the domestic politics explanation. I show that targets' behavior in the post-sanctions period is *not* a significant determinant of whether sanctions recur. Instead, sanctions are more likely to recur if the leader changes in the sender country and a different societal coalition becomes influential. I argue that the leaders that end sanctions are prone to facing domestic costs if they renew sanctions; while new leaders, especially the ones that represent a different societal base are immune to these costs. On the contrary, sanctions recurrence can provide them with opportunities for political gain.

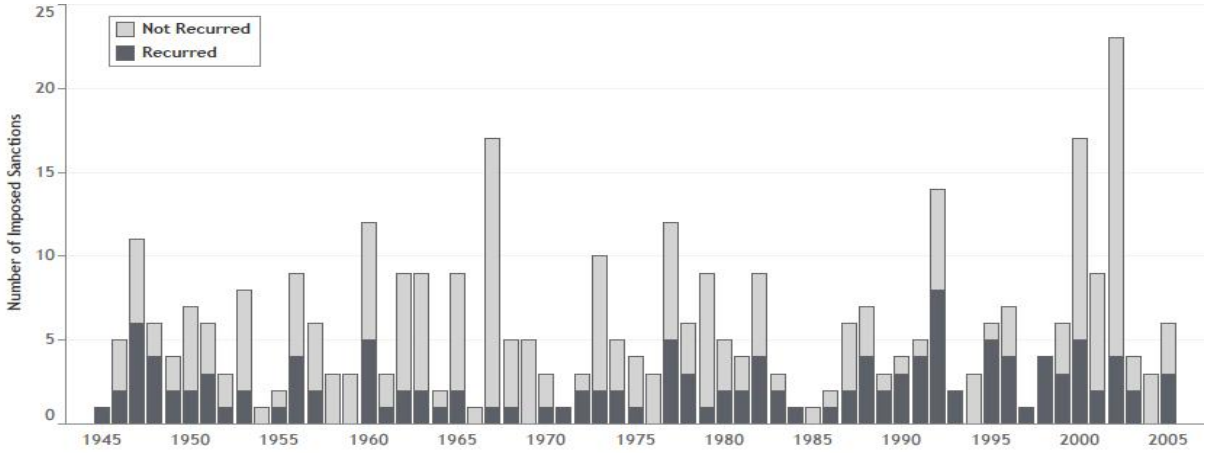
Analyzing the Aftermath of Sanctions Removal

Despite the growing body of literature on economic sanctions and the increasing use of economic coercion as a foreign policy tool, our understanding on the sanctioning process is limited to the time period in which sanctions are in place and the scholarly interest in economic sanctions often dissipates with their termination. The research on economic sanctions has extensively focused on the question of when economic sanctions end (Krustev and Morgan, 2011; Dorussen and Mo, 2001; Bolks and Al-Sowayel, 2000) and succeed in achieving their intended goals (Dizaji and Bergeijk, 2013; Bapat and Morgan, 2009; Peksen and Peterson, 2015; Allen, 2005; Cortright and Lopez, 2002; Dashti-Gibson, Davis and Radcliff, 2007; Early, 2015; McLean and Whang, 2010). However, even in the cases that end with target acquiescence and sender success, sanctions removal does not always lead to continued economic and financial transactions in the long-run. The Threat and Imposition of Sanctions (TIES) Dataset (Morgan, Bapat and Kobayashi, 2014) identifies 358 security-related sanctions imposed and lifted between 1945-2013. As illustrated in Figure 5, in 37 percent of those

cases, senders threaten their targets with new sanctions or impose new sanctions on them in the ten years following sanctions removal. In those recurred cases, the initial sanctions removal does not mark the end of the sanctioning activity between senders and targets. It only provides an opportunity for senders and targets to resume their profitable financial and economic transactions temporarily.

Every renewed sanctions episode identified in Figure 5 is also an instance of sanctions onset. Most scholarly work that identifies when senders employ threat and imposition of economic sanctions typically investigates instances of sanctions onset within the same dyad as unrelated, isolated processes (Lektzian and Souva, 2003; Smith, 1996). However, analyzing recurred sanctions as independent instances of sanctions onset, and not accounting for how the consequences of the decision to end initial sanctions influence the sender-target relations in the post-sanctions period would be misleading. Senders and targets continue to interact following sanctions removal and sanctions-level characteristics continue to influence their relations after sanctions end. Targets' decisions about their foreign policy choices in the post-sanctions period, as well as senders' decisions to initiate new sanctions are made in the shadow of the characteristics of the initial sanctions, their termination, and the consequences of the lifting of sanctions. Therefore, answering the question of when sanctions recur necessitates examining the consequences of the decision to end sanctions in the first place.

Figure 5: Sanctions Recurrence Over Time



Note: This figure shows the frequency of sanctions recurrence of the security-related sanctions imposed between 1945-2005. The height of the bars show the number of sanctions imposed in a given year. The black bars show the number of imposed sanctions that have recurred in 10 years following their removal, and the light gray bars show the number of imposed sanctions that have not recurred.

Ending sanctions have economic and domestic consequences in varying degrees in both the sender and the target country. One of the main consequences of sanctions removal is the resumption of profitable economic and financial transactions between the sender and the target. Sanctions are designed to harm the target country's economy, either directly by freezing or limiting economic and financial transactions, or indirectly by creating market imperfections through fines on individuals and businesses, travel bans or increased uncertainty about the economic stability of the targeted country. Theoretically, the accumulation of these direct and indirect costs are expected to inhibit the target's ability to pursue its offensive behavior (Dorussen and Mo, 2001) and force the target to make policy concessions (Morgan, Bapat and Kobayashi, 2014; Hufbauer et al., 2007). Removing sanctions, on the other hand, resumes profitable economic and financial transactions and reverses the market imperfections, thereby strengthening the target's economy. Sanctions termination and the subsequent provision of sanctions relief often generate economic gains for the targeted country in the form of increased trade revenues, repatriation of assets frozen abroad, the ease of financial transactions, and an increased flow of investment or foreign aid.

Targets' access to sanctions relief has two complementary implications for sender-target relations in the post-sanctions period. First, a stronger economy contributes to the target's future bargaining power (Fearon, 1996; Chadefaux, 2011; McCormack and Pascoe, 2015) and makes the target more resilient to economic pressure. If the sender chooses to use economic sanctions as a coercive strategy in the future, it will now be facing a wealthier target with a stronger negotiating position, and a target that is more capable of offsetting the costs of new sanctions. In other words, sanctions removal might hinder the effectiveness of the next round of sanctions; thus influences the assessment of senders about sanctions recurrence.

Second, having a stronger economy might create incentives for the target to channel the gains obtained through sanctions relief into its foreign policy challenges that initially triggered sanctions, or adopt new policies that might be offensive to the sender. For instance, Iran is currently enjoying significant boost in its oil revenue, foreign investment, and access to previously frozen assets. This raises concerns about its ability to credibly commit not to pursue its nuclear ambitions. Moreover, there are increased concerns about the country's sponsoring of terrorism using the gains from sanctions relief. In fact, in October 2017, the U.S. has formally added Iran's Islamic Revolutionary Guards Corp (IRGC) to its anti-terrorism sanctions list, stating that the group had been designated

for providing support to a number of terrorist organizations, including Hezbullah and Hamas, and the Taliban.[32]

Overall, sanctions relief can provide the target with opportunities to challenge the status quo in the post-sanctions period. As the target state gets wealthier with sanctions relief, it may not be able to credibly commit not to take advantage of sanctions removal and exploit the greater bargaining leverage it has (Powell, 2004, 2006). Commitment problems can be more acute in cases where sanctions removal deals are difficult to enforce and the target's behavior is hard to detect (Fearon, 1998; Schultz, 2010). In sum, once senders end economic sanctions, they might lose leverage over targets and their policy choices.

Sanctions removal and the subsequent resumption of economic and financial interactions generate additional wealth for the sender country as well. Once sanctions are lifted, and it becomes legal to invest in or conduct business with previously targeted countries, and once the relationship between the sender and the target starts normalizing, new lucrative economic opportunities arise for senders and their companies. However, the public choice approach and the rent-seeking literature establish that these consequences are likely to be felt disproportionately across domestic groups (Eyler, 2007; Lektzian and Patterson, 2015). Economic sanctions create winners and losers in the domestic economy, and divide special interest groups and voters along the pro-sanctions/anti-sanctions line (Kaempfer and Lowenberg, 1992). The market distortions produced by sanctions, especially trade sanctions, are similar to distortions produced by protectionism (Selden, 1999; Pond, 2017). They create rents for domestic producers by raising the prices of importable goods above the world price (Dorussen and Mo, 2001). On the contrary, they cause export-oriented producers lose access to foreign markets. Sanctions removal reverses these distributional effects and creates a new set of winners and losers in the sender's domestic economy. Therefore, special interests groups that used to enjoy net benefits from sanctions might pressure the government for the renewal of economic sanctions; whereas, special interest groups that experienced economic losses under sanctions will be satisfied with the removal decision and oppose any new sanctions on the target country. This new domestic environment is expected to factor into senders' sanctions policies following sanctions removal.

[32]U.S. Department of the Treasury, Press Center."Treasury Designates the IRGC under Terrorism Authority.", 13 October 2017, Retrieved from: https://www.treasury.gov/press-center/press-releases/Pages/sm0177.aspx.

How do these economic and domestic consequences of sanctions removal affect the likelihood of sanctions recurrence? Do senders act strategically and renew sanctions in response to target recidivism in the aftermath of sanctions removal, or is the recurrence decision mainly influenced by the domestic politics of the sender country? In the following sections, I expand on both explanations and formulate two competing hypotheses about when sanctions recur.

A Strategic Analysis of Sanctions Recurrence

A considerable amount of the literature on economic sanctions has used the bargaining framework by conceptualizing sanctions episodes as instances of strategic interaction between senders and targets (Drezner, 1999; Lacy and Niou, 2004; Krustev, 2010; Morgan and Schwebach, 1997; Bapat and Kwon, 2015; Cortright and Lopez, 2002). The research presented in these studies often defines economic sanctions as a coercive foreign policy tool designed to induce a targeted country to change some of its policies it would not otherwise, in a way favorable to the sender (Baldwin, 1985; Hufbauer et al., 2007; Morgan, Bapat and Krustev, 2009*a*). In theory, sanctions achieve this by imposing economic costs on the targeted country, and demanding policy change in exchange for sanctions relief. The promise of resuming profitable economic interactions or reversing market imperfections are expected to serve as a credible bargaining leverage for senders to induce target cooperation. The implicit assumption made by all of these studies is that the driver of the sender's decision is the target's behavior and the goal of the sanctioning behavior is to convince the target to make policy concessions. Economic sanctions aim to affect the target's cost/benefit analysis and alter its assessment about the feasibility of its offensive behavior by increasing the costs of it.

According to the bargaining framework, once sanctions are removed, there is often an implicit expectation that sanctions will be renewed in case of a non-compliance. Targets' non-compliance can either be in the form of recidivism, pursuing the offensive behavior that initially triggered sanctions, or in the form pursuing a new offensive behavior using the gains from sanctions relief. Either way, senders are expected to call on this behavior by threatening them with new sanctions, or punish them with potentially harsher sanctions. This is especially true if the initial sanctions ended with partial or full target capitulation or a negotiated settlement. If the sender fails to punish the target's offensive behavior in the post-sanctions period, this can have negative implications on the credibility

of the sender in future sanctions removal negotiations. The sender's reaction to the target's behavior following sanctions removal allows targets to differentiate between resolved and unresolved senders. Therefore, senders always have an incentive to monitor the target's behavior and enforce sanctions removal deals. Assuming that the causal mechanisms for sanctions onset identified by the literature using the bargaining framework is applicable to the context of sanctions recurrence, I formulate the following hypothesis:

H1: *Senders are more likely to initiate new sanctions episodes if the target engages in an offensive behavior in the aftermath of sanctions removal.*

Domestic Politics of Sanctions Recurrence

Hypothesis 1 argues that senders' decision to renew sanctions is a strategic reaction to the target's behavior in the post-sanctions period and the goal of renewing sanctions is to punish the target's offensive behavior in an effort to convince the target to comply. However, the initial decision to end sanctions and the domestic consequences of this decision can also influence senders' decisions about whether to renew sanctions. First, targets' offensive behavior might not trigger new sanctions if the domestic costs of this foreign policy decision is high. Second, the sender's leadership might expect to receive domestic gains from sanctions recurrence. If this is the case, we can observe new sanctions even if the target is not definitively pursuing an offensive behavior. Therefore, sanctions recurrence can also be conceptualized as a decision made by the leadership of the sender country weighing these domestic costs and benefits, instead of being a strategic reaction to the policies adopted by the target following sanctions removal.

Leaders are often constrained by the preferences of domestic actors. They are driven by the desire to remain in office or in power and they have incentives to earn or increase the support of their winning coalition (Bueno de Mesquita et al., 2005; Huth, 1996). To this end, they pursue policies, including foreign policies, in the best interest of the particular societal coalition that keeps them in power. Following this logic, we can argue that the initial decision to end sanctions was influenced by the special interests groups that were harmed by the existing sanctions regime and their lobbying efforts. Once sanctions end, the winners of the sanctions regime lose their economic advantage generated by sanctions and groups that incurred net costs due to the sanctions regime reverse these

costs. If the leader who initially made the decision to remove sanctions is still in power, she will be constrained by the same set of societal interests that favored sanctions removal. In these cases, sender's hands might be tied and sanctions recurrence can be domestically costly, even in the face of target recidivism.

Leaders are not only constrained by special interests groups, but also by public opinion at large. Leaders view approval as an asset and disapproval as a political cost (Edwards, 1997). Therefore, when they make decisions about whether to initiate new sanctions, they account for the potential reaction of the public to this decision. If the leader initiates new sanctions against the target in the post-sanctions period, she inevitably signals foreign policy inconsistency and admits that the initial decision to end sanctions was a mistake. The public often perceives foreign policy inconsistency as evidence of incompetence (Tomz, 2007). Such signals can trigger disapproval, even by those who originally opposed sanctions removal (Hermann, 1990). Therefore, senders might choose not to re-initiate sanctions in the aftermath of sanctions removal, even if the target pursues an offensive behavior. In these cases, avoiding blame and ensuring foreign policy consistency can be prioritized by the leader over taking a chance at altering the target's offensive behavior.

The public's evaluation of foreign policy is an integral part of their overall performance assessment of their leaders (Nincic and Hinckley, 1991). It has been suggested that for this link to exist, the public needs to be informed about foreign policy. Special interest groups do have a strong incentive to pay attention to sanctions policies and its distributional effects. And in the case of the larger public, Aldrich, Sullivan and Borgida (1989), and more recently, Kertzer and Zeitzoff (2017) show that even if the public lacks information, they can still rely on their predispositions and principles in forming attitudes towards specific foreign policy issues. A common attitude Tomz (2007) identifies is a dislike for inconsistency. Even if the public may not be informed about the details of the sanctioning decisions, they will consider inconsistency as a sign of weakness. Therefore, this creates incentives for leaders to factor "foreign policy consistency" into their sanctions recurrence decisions.

However, these two domestic political costs of sanctions recurrence, alienating the special interests groups that are salient for the leadership, and signaling foreign policy inconsistency, are only applicable to the leaders who initially terminated sanctions, or the new leaders that represent the same societal base or political party. Leaders who did not invest their own political capital to the decision to end sanctions can easily overcome these challenges. This is especially true if the

new leader represents a new societal base, whose preferences are different from the groups that her predecessor was drawing support from. On the contrary, they can expect political gains from sanctions recurrence.

The bargaining framework, as well as Hypothesis 1, assume that "the sender finds sanctions useful only for their potential impact on the target's policies" (Krustev and Morgan, 2011), and sanctions are an outcome of strategic interaction between senders and targets. However, altering the target's behavior may not be the only objective of senders when they formulate policies regarding sanctions recurrence. Senders also have domestic objectives, such as increasing popular support, appealing to certain special interest groups, thwarting internal criticism, avoiding foreign policy inconsistency or signaling strength and decisiveness (Whang, 2011; McLean and Whang, 2014).

In the case of sanctions recurrence, sanctions can have utility even if they do not alter the target's behavior (Lindsay, 1986), and moreover, even if the target is not pursuing a foreign policy that needs to be altered. First, the new leaders that represent a new societal base can expect to gain political benefits by appealing to the societal interests groups that initially opposed sanctions removal. Second, sanctions recurrence can serve as a tool for new leaders to differentiate themselves, and their foreign policies, from their predecessors' (Hermann, 1990). In sum, new leaders do not only isolate themselves from the potential domestic costs of sanctions recurrence that their predecessors would face, but also expect domestic gains from it. This discussion leads to the following hypothesis:

H2 *- Senders are more likely to initiate new sanctions episodes against targets if senders' domestic sources of leader support change.*

A closer look at the Iranian sanctions, one of the three high-profile sanctions the U.S. has ended in 2016 and renewed in 2017, illustrates both hypotheses. President Trump announced his willingness to de-certify the Iranian nuclear deal, and on the same day, he also announced the imposition of new terrorism related sanctions on Iran. Why did President Trump re-consider his predecessor's decision to end sanctions on Iran? Hypothesis 1 and 2 offer competing explanations to this question.

According to Hypothesis 1, senders can initiate new sanctions if the target channels the gains from sanctions relief into the policy that initially triggered sanctions, or into another policy that is offensive to the sender. President Trump might be concerned about the Iranian compliance with the nuclear deal. Despite the reports published by the International Atomic Energy Agency (IAEA)

attesting to the Iranian compliance,[33] he has stated in numerous occasions that "Iran has committed multiple violations of the agreement." Similarly, he might be concerned about the implications of a stronger Iran and the regime's future foreign policy choices.

The discussion leading up to Hypothesis 2 establishes how the hands of the leaders who end sanctions might be tied in the post-sanctions period; however, new leaders are often immune to the domestic costs of sanctions recurrence. On the contrary, they might expect political gains from sanctions recurrence. President Trump might be expecting political gains from reviving the Iranian sanctions debate. Withdrawing from the nuclear accord was one his main foreign policy campaign promises and he has frequently criticized President Obama and his administration for signing "*one of the worst and most one-sided transactions the United States has ever entered into.*" Renewing sanctions on Iran can potentially receive the support of the Republicans and the special interest groups that initially opposed the nuclear deal. According to the Pew Research Center's polling conducted in mid-July 2015, shortly after President Obama announced the deal, only 6% of Republican respondents indicated support for the deal and 75% of Republican respondents indicated that the ability of the U.S. and international agencies to monitor Iran's compliance is either "not too much" or "none at all".[34] This suggests that President Trump's decision to renew sanctions on Iran can appeal to his political base.

Data and Research Design

To test these two competing hypotheses and determine which factors influence senders' decision to re-initiate economic sanctions and which do not, I primarily use sanctions data from the Threats and Imposition of Sanctions (TIES) dataset (Morgan, Bapat and Kobayashi, 2014). The TIES Dataset contains information on sanctions episodes initiated between 1945 and 2005 and each episode's start and end dates, along with many other sanctions-level characteristics. I create a time-series cross-sectional dataset where sanctions episodes enter into the dataset once they have been lifted.

[33]"IAEA confirms Iran is meeting its commitments under nuclear agreement" (2017, November 13), *The Washington Post*. Retrieved from: https://www.washingtonpost.com/world/national-security/iaea-confirms-iran-is-meeting-its-commitments-under-nuclear-deal/2017/11/13/8d9b9fb0-c893-11e7-b0cf-7689a9f2d84e_story.html?utm_term=.897abcec489a

[34]For the full report, see: http://assets.pewresearch.org/wp-content/uploads/sites/5/2015/09/09-8-2015-Iran-release.pdf

When a sanctions episode ends, the sender-target dyad enters an economic peace spell during which it is at risk of relapsing into a renewed sanctions episode. To capture this economic peace spell, I create 10 post-sanctions years for each episode and identify whether sanctions recur or not in these years. I observe dyads until a new sanctions episode is initiated by the sender against the same target or until the end of the tenth post-sanctions year, in which case the dyad is right-censored. The unit of analysis is dyad-year for the aftermath of each security related sanctions episode and the dataset covers the years between 1947-2012.[35]

As an illustration of how I create the dataset, a closer look at a few sanctions episodes can be helpful. For instance, the U.S. imposed sanctions on Pakistan in 1965 to contain Pakistan's military aggression in the region. Sanctions were lifted in 1975, and the US-Pakistan dyad enters into the dataset in the year 1976. The U.S. initiates a new sanctions episode against Pakistan to destabilize the regime and improve its human rights in 1977; therefore, US-Pakistan dyad is observed for the years of 1976 and 1977. To look at the right-censored dyads, let me examine US-Poland sanctions. The U.S. imposed sanctions on Poland in 1980. Sanctions were lifted in 1984, and the US-Poland dyad enters into the dataset for the years between 1985 and 1994, as there were no recorded sanctions episode initiated by the U.S. against Poland in the 10-year period after the termination of initial sanctions.

If the initial sanctions episode has multiple senders, or was initiated by an international organization, I maintain the dyadic structure of the data, where the first country is the "primary sender" and the second country is the target state. The TIES Dataset codes a "primary sender" as the state that proposes sanctions or is responsible for mobilizing other states to initiate sanctions. For instance, the U.S.-Poland case referenced above was initiated primarily by the United States in partnership with France, the United Kingdom, Belgium and Germany; however, the TIES dataset identifies the "primary sender" as the United States. Therefore, I observe the aftermath of sanctions for the US-Poland dyad.

[35]The datasets starts in 1947, because the earliest sanctions removal date recored by the TIES dataset is 1946. The latest end year recorded is 2011, and for those cases, the hypothetical 10-year window goes until 2021. The latest post-sanctions year covered is 2012, due to availability of data for independent variables.

Lastly, I only analyze the aftermath of security-related sanctions[36] for two reasons: First, trade-related sanctions are imposed due to the target's trade practices or economic policies and tend to be less severe. They often target a specific economic sector and do not harm the target's economy as a whole (Peksen and Peterson, 2015; Drezner, 2003). Therefore, their removal does not create the same degree of commitment problems as security-related sanctions. Similarly, sanctions relief is typically enjoyed by the specific sector that was initially targeted, not by the target government. Second, trade-related sanctions are often initiated by bureaucratic branches, such as the Treasury/Commerce departments or agencies like the Office of Foreign Assets Control in the United States. Sanctions decisions made by these agencies do not frequently receive public attention or media coverage. On the contrary, security-related sanctions tend to have a higher visibility and generate significant public awareness, which in return constrains the leadership of the sender (Baum and Potter, 2008).

In creating my dataset, I also account for sanctions episodes with no recorded end dates in the TIES Dataset. There are 26 such cases in my dataset and dropping them out of the analysis would result in a loss of valuable information.[37] Therefore, I use the information on the year of the last reported incident provided by TIES. The variable named *ongoing as of year* identifies the last year in which the data collectors were able to obtain information on the case and no further information about the case was found. I treat the year after the *ongoing as of year* as the end year and construct post-sanction years for the years following that end date. For instance, the U.S. imposed sanctions on Ireland in 1952 due to Ireland's alignment choices and the TIES dataset records the *ongoing as of year* as 1986. Assuming that the episode was still ongoing in 2012 will be misleading. Therefore, I code the end-year of the episode as 1987 and include observations for the U.S.-Ireland dyad for the years between 1988 and 1997.

Overall, the final dataset consists of 2722 observations, accounting for post-sanctions years of 358 unique security-related economic sanctions imposed between 1945 and 2005 and the observations cover the years between 1947 and 2012.

[36]Containing political influence and military behavior, destabilizing regimes, demanding the release of citizens or property, solving territorial disputes, denying strategic material, retaliating for alliance choices, demanding human rights improvements, ending weapons proliferation, terminating support of non-state actors and punishing drug trafficking are considered as security-related goals.

[37]I also estimate the main model by dropping those 26 cases. The results remain the same and they are presented in Appendix B.

Dependent Variable

I code *Sanctions Recurrence* as a binary variable capturing the onset of a new sanctions episode involving the same sender and the target. A new episode can be initiated either by a threat or an imposition of economic sanctions. Treating threats as instances of sanctions recurrence is in line with the causal mechanisms of the two competing theories I test. The bargaining theory establishes the importance of sanction threats and shows that effective sanctions are the ones that convince the target to alter its policy at the threat stage (Smith, 1996; Lacy and Niou, 2004). If senders want to alter the target's behavior in the post-sanctions period, threats can be a cost-effective coercive policy. Moreover, threats can be instrumental for domestic purposes even if it is not followed through.

I also allow the issue under contention for the renewed sanctions to be different than the issue under contention for the initial sanctions. Once sanctions are lifted and the target starts enjoying the gains from sanctions relief, it will have the opportunity and resources to pursue an offensive behavior that may not necessarily be the same as the behavior that led to sanctions initially. For instance, the U.S. imposed new sanctions on Iran in October 2017 due to Iran's support for terrorism and the new sanctions can still be conceptualized as a continuation of the nuclear-related sanctions that ended in 2016. In fact, in some cases, targets can be incentivized not to pursue the offensive behavior that initially triggered sanctions due to increased scrutiny over that behavior, especially in the short-run. However, they may choose to pursue a different offensive behavior in the hopes that they will get away with it.

The TIES dataset codes instances of threats and imposition of economic sanctions between the years 1945-2005. Therefore, I cannot use the TIES Dataset to identify sanctions recurrence for the years after 2005. For that reason, I gather new data on sanction threats and impositions between the years 2005 and 2012. To collect this information, I primarily consult *Lexis Nexis*, a database of electronic news drawn from the archives of over 10,000 press agencies and newspapers. I also consult government reports, United Nations resolutions, European Union documentation, and the GIGA Sanctions Dataset that codes sanctions imposed by the UN, US and EU in the period from 1990 to 2010 (Portela and von Soest, 2012). In identifying threats and impositions, I strictly follow the coding rules of the TIES dataset to ensure consistency.[38]

[38] A list of the newly coded episodes and their short summaries can be found in Appendix B.

Sanctions Recurrence is coded as 0 for each year of economic peace in the post-sanctions period and 1 on the first year of renewed economic sanctions. Once a sanctions recurrence is observed, I stop observing the aftermath of the episode in consideration. Since the outcome variable is binary, I use logistic regression. I also use robust standard errors adjusted for clustering on the target state to take potential dependence among targets into account.

Of the 358 unique security-related sanctions imposed between 1945 and 2005, 133 of them recurred, accounting for 37% of the cases. I also coded the issue(s) under contention for the new sanctions episode and whether it is the same as the initial episode or not. Interestingly, the majority of new sanctions episodes are triggered by a different offensive behavior than the one triggered the initial sanctions. Only 35 of those 133 instances of recurrence are due to the same issue that initially triggered sanctions.

Key Explanatory Variables

Hypothesis 1 suggests that senders are more likely to initiate new sanctions episodes in response to their target's pursuit of offensive behavior following sanctions removal. To test this hypothesis, I need a measure of whether the target pursues an offensive behavior in the aftermath of sanctions removal. What constitutes an offensive behavior differs for senders. Therefore, I identify several high-stake foreign policy challenges that are widely accepted to be offensive and code the *Bad Behavior* variable compiling information from multiple data sources. First, I code whether the target is recorded as a trigger state in the International Crisis Behavior (ICB) Dataset (Brecher et al., 2017). The ICB Dataset provides information on interstate military-security crisis and covers the entire temporal scope of my sample. If the target state is recorded as a trigger/initiator of a military-security crisis in a given post-sanctions year, I code *Bad Behavior* as 1. Second, I use information from Militarized Interstate Disputes (v4.1) Dataset (Palmer et al., 2015) that codes cases of conflict in which the threat, display or use of military force short of war by one member state is explicitly directed towards another state. I code *Bad Behavior* as 1 if the target state initiates a militarized interstate dispute in the aftermath of sanctions removal. Third, Militarized Compellent Threat Dataset (Sechser, 2011) records instances of an explicit demand by one state that another state alters the status quo in some material way, backed by a threat of military force if the state does not comply. If the target country is coded a challenger in the MCT Dataset in a given year in the post-sanctions period, I code *Bad*

Behavior as 1. Lastly, I code the variable as 1 if the target engages in one-sided violence, the use of armed force against civilians which results in at least 25 deaths (Eck and Hultman, 2007; Allansson, Melander and Themner, 2017).

To test Hypothesis 2, I create a binary variable measuring whether a sender country brings to power a new leader whose primary support is drawn from different societal groups than those who supported her predecessor, using the Change in Source of Leader Support (CHISOLS) Dataset (Mattes, Leeds and Matsumura, 2016). The variable captures the instances of leader changes that is also associated with a *change in source of leader support*, cases in which the subset of societal groups whose support allows the leader to retain power differs between the new leader and her predecessor. In coding the variable, I first identified who the leader was and what her political affiliation was at the time of sanctions removal, and code whether the leader of the country in a given post-sanctions year belong to the same societal support base or not. I code the *Change in Source of Leader Support* variable as 0 for the years in which the same leader who ended sanctions or a different leader with the same political affiliation is in power. The variable is coded as 1 only if the sender country is ruled by a new leader that receives its support from a different societal base than her predecessor who ended sanctions.

For example, the U.S. imposed sanctions on Romania in 1950 and lifted them in 1960 when Republican President Eisenhower was in power. The case enters into the dataset with the termination of sanctions and I observe the dyad from 1961 until the end of 1970, the tenth post-sanctions year. The *Change in Source of Leader Support* variable is coded as 1 for the years between 1961 and 1968, since the U.S. had two Democratic presidents in that period, President Kennedy and President Johnson, and their source of domestic support was different than Eisenhower's. The variable is coded as 0 in the year of 1969, since President Nixon, a Republican politician, took office and his support base was the same as Eisenhower's.

For the cases where the leadership in the sender country changes in the same year as sanctions termination, I examine the exact date of sanctions removal and leadership change to accurately code the variable. For instance, the U.S. ends sanctions on Nicaragua in 1993 and President Clinton takes office in the same year, following President Bush. Before coding the *Change in Source of Leader Support*, I first identify that the sanctions were terminated on April 1993, 3 months after Clinton took

office. Therefore, I code whether the U.S. has a new leader with a new political support base in the post-sanctions period, using Democratic President Clinton as the comparison point.

Control Variables

Additionally, I control for other factors that can predict the likelihood of sanctions recurrence. First, I include a measure of *Foreign Policy Affinity*, using data assembled from UN General Assembly votes (Voeten, Strezhnev and Bailey, 2009). The dataset provides a score of foreign policy similarity within dyads ranging from -1 (least similar) to 1 (most similar). In line with the literature on sanctions onset, I expect this variable to be inversely related to the likelihood of sanctions removal. Second, I control for the relative strength of the sender to the target, using the Composite Index of National Capability (CINC) (Singer, 1987).

In addition, I control for three characteristics of the initial sanctions. First, I account for how initial sanctions ended. I code *Target Acquiescence* as 1 if the initial sanctions ended with the target's partial or full concessions, or a negotiated settlement, and 0 if the sanctions ended with sender capitulation. If the initial sanctions ended with target concessions, non-compliance in the post-sanctions period can be more likely to be punished than a case where the episode ended with sender capitulation.[39] Second, I code *Multilateral* as 0 if the initial episode was unilateral, and as 1 if it was initiated through an international organization or had multiple senders. Since attracting the same level of support for new sanctions is often challenging, I expect to find that multilateral sanctions are less likely to recur. I also control for whether the initial sanctions had one or more issues under contention. *Multiple Issues* variable is coded as 0 if TIES data codes just a single security-related issue as the trigger of sanctions, and 1 if there were more than one issues under contention.

There are many sender-target dyads with more than one peace spell in the data set. Treating these observations independent could possibly bias coefficient estimates. Therefore, I generate a count variable named *Frequency of the Dyad* that counts the number of times the sender-target dyad appears in the dataset up until the time an episode enters into the dataset. The variable accounts for the history of economic conflict between the sender and the target and higher frequency of sanctioning activity

[39] As an additional robustness check, I also restricted the sample to the set of cases where *Target Acquiescence* is coded as 1.

can predict future economic conflict. Lastly, I control for the temporal dependency by using cubic polynomial approximation (Carter and Signorino, 2010). I first add the *Count of Post-Sanctions Years*, a duration variable measuring the length of post-sanctions economic peace spell. The variable is coded as 1 for the first post-sanctions year of a given sanctions episode, 2 for its second year, 3 for its third year, and 10 for its tenth year. I also add its squared and cubed terms as regressors.

Results

Table 3 presents the results of a logistic regression. Each model tests the effect of independent and control variables discussed above on the likelihood of sanctions recurrence. Model 1 uses the full sample of post-sanction years of each security-related sanctions episode. Model 2 restricts the sample to cases where the sender of the initial episode was a democratic state. The justification for this restriction is two-fold: First, the operationalization of *Bad Behavior* can be argued to be from a democratic sender's perspective. Second, the domestic theory of sanctions recurrence might be more applicable to democratic senders, as the link between public opinion and foreign policy decision making is stronger in democracies (Risse-Kappen, 1991). Model 3 restricts the sample to the cases where the target is engaging in an offensive behavior in the aftermath of the removal of initial sanctions. This model captures the likelihood of the sender to respond to the target's pursuit of an offensive behavior with new sanctions.

In both Model 1 and 2, *Bad Behavior*'s coefficient estimate is positive, but does not achieve conventional levels of statistical significance. In other words, the analysis did not reveal any significant differences between targets that pursue an offensive behavior and targets that do not. Therefore, the results do not provide support for Hypothesis 1, the bargaining theory of sanctions recurrence. On the contrary, it suggests that sanctions recurrence cannot be conceptualized as a mere reaction of the sender to the target's offensive behavior in the post-sanctions period. Sanctions research that conceptualizes sanctions episodes as an outcome of the strategic interaction between the sender and the target assumes that the goal of economic sanctions is to alter the behavior of the target by increasing the costs associated with that behavior. However, the results show that target's behavior does not shape the sender's decision to initiate new sanctions.

Table 3: Logistic Regression: Sanctions Recurrence

DV: Initiating a New Sanctions Episode	Model 1	Model 2	Model 3
Bad Behavior	0.302	0.479	
	(0.28)	(0.28)	
Change in Source of Leader Support	0.580*	0.589*	0.995**
	(0.24)	(0.26)	(0.34)
Growth of S's Trade with T	-0.475**	-0.515**	-0.207
	(0.17)	(0.17)	(0.23)
Foreign Policy Affinity	-0.712**	-0.730***	-0.641*
	(0.23)	(0.21)	(0.28)
Frequency of the Dyad	0.323***	0.327***	0.292***
	(0.06)	(0.05)	(0.07)
Multilateral	0.572*	0.521*	0.401
	(0.25)	(0.23)	(0.34)
Multiple Issues	-0.409	-0.623*	-0.806*
	(0.24)	(0.27)	(0.38)
Relative CINC Scores	-0.000*	-0.000	0.002
	(0.00)	(0.00)	(0.00)
Target Acquiescence	0.268	0.275	0.024
	(0.23)	(0.23)	(0.29)
Count of Post-Sanctions Years	-0.211***	-0.180**	-0.227**
	(0.06)	(0.07)	(0.08)
Constant	-4.138***	-4.134***	-3.508***
	(0.36)	(0.37)	(0.53)
N	2153	1566	619

- Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
- Estimates are derived from a logistic regression model and standard errors are clustered around the target state.
- Temporal controls are omitted.

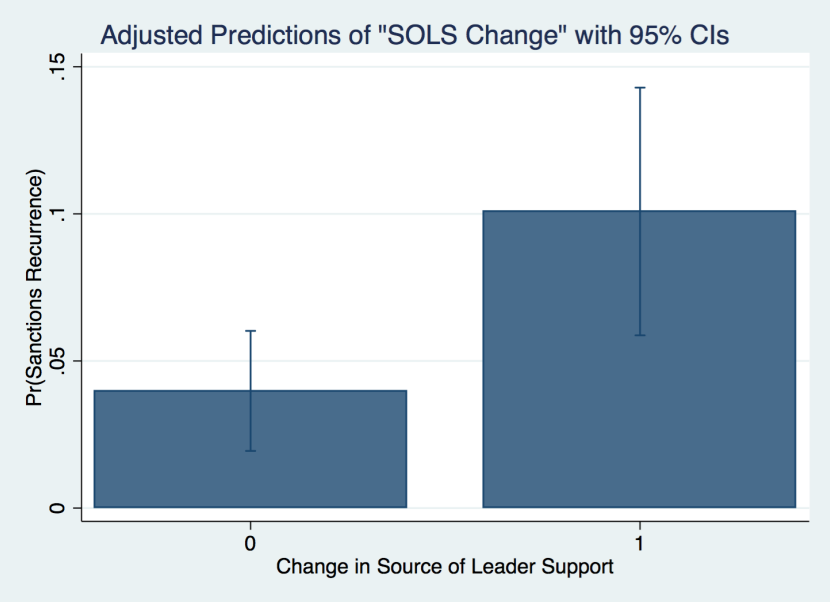
The domestic theory of sanctions recurrence, on the other hand, is empirically supported. The results suggest that senders' domestic considerations do shape whether they will choose to initiate new economic sanctions in the aftermath of sanctions removal. *Change in Source of Leader Support*'s coefficient estimate is positive and statistically significant across all model specifications. Confirming Hypothesis 2, the results show that sanctions are more likely to recur if the sender country has a new leader in power in the post-sanctions period and if the new leader is supported by a different social base than the base of its predecessor who ended sanctions. I argue that these new leaders are immune from the domestic costs of sanctions recurrence, such as signaling foreign policy inconsistency and admitting wrong-doing, but on the contrary, they may expect domestic gains from sanctions recurrence by appealing to their political base and special interest groups that incur losses from sanctions removal. The support for the domestic theory of sanctions recurrence is even more visible in Model 3, since the results hold even for the sample restricted to the cases where the target is engaging in an offensive behavior. In these cases, whether there is a change in source of leader support is still a significant determinant of the sender's decision to initiate a new sanctions episode. Taken as a whole, the results show that sanctions recurrence is primarily shaped by senders' domestic considerations and does *not* occur in reaction to targets' offensive behavior in the post-sanctions period.

Figure 6 portrays the main result visually. The x-axis presents the range of the binary variable *Change in Source of Leader Support*; such that the bar on the left are the cases where the variable is equal to 0 and the the bar on the right indicates the cases where the variable is equal to 1. The y-axis indicates the predictive probability of sanctions recurrence. The heights of the bars show the likelihood of sanctions recurrence at

The probability of sanctions recurrence doubles if a new leader takes that represents a different societal group in the aftermath of sanctions removal. Even if this is a significant increase, it is important to note that the likelihood of sanctions recurrence is still very low. This is expected given the low frequency of sanctions removal. In my dataset, sanctions recurrence dependent variable is coded as 1 in only 4.8 percent of the cases.

The results for the control variables included in the models also merit discussion as they can inform our understanding on sanctions recurrence and provide opportunities for future research. In line with the findings of sanctions onset literature, as the foreign policy affinity between the sender

Figure 6: Predictive Margins - The Effect of *SOLS Change* on Pr(Sanctions Recurrence)



and the target increases, the likelihood of sanctions removal diminishes. Moreover, *Frequency of the Dyad*'s positive and statistically significant coefficient indicates that sender-target dyads with a history of economic sanctions are more likely to relapse into renewed sanctions, suggesting path dependency.

The results of *Multilateral* and *Multiple Issues* require further discussion and potentially future research. Initially, I expected to find that multilateral sanctions are harder to re-initiate, assuming that it is hard to maintain the level of support that the initial sanctions had and to convince the coalition members for new sanctions. However, the results provide support for the opposite, and show that multilateral sanctions are more likely to recur than unilateral ones. The coefficient estimate for *Multiple Issues* is negative in all models, and statistically significant in Model 2 and 3, suggesting that the sanctions that were initially imposed for more than one offensive behavior of the target are less likely to recur. More research is needed to explore the relationship between these two sanction characteristics and sanctions recurrence.

Conclusion

This article explores the conditions under which economic sanctions recur. It presents two competing hypotheses and analyzes whether sanctions recur due to concerns about the target's behavior in the

post-sanctions period, or due to the sender's domestic considerations. The empirical results lend support for the domestic politics explanation. I find that the sender country is more likely to initiate a new sanctions episode against its target in the aftermath of sanctions removal, if the sources of leader support changes following the termination of sanctions. The causal mechanism I propose is two-fold: First, I argue that sanctions recurrence is costlier for the leaders that gave the decision to end sanctions. Initiating a new sanctions episode signals foreign policy inconsistency and admits wrong-doing. Moreover, the decision is likely to be opposed by the special interest groups that were influential in the initial decisions to end sanctions. If, however, the leader of the sender country changes in the post-sanctions period, and the new leader receives its support from a different societal base than its predecessor, sanctions recurrence will not create the same degree of costs. On the contrary, it might generate domestic benefits.

In addition to presenting findings about when sanctions recur, this study has important implications for future sanctions research. It proposes a new avenue of research that integrates the aftermath of sanctions removal into the theories of sanctioning process. There are a number of interesting and policy-relevant questions that can be answered by examining how sender-target relations evolve in the aftermath of sanctions removal.

CHAPTER 4: ECONOMIC SANCTIONS, FOREIGN DIRECT INVESTMENT AND FIRMS' EX ANTE RISK ASSESSMENT

The sanctions literature follows the argument that senders aim to cause economic pain in the target country by restricting trade and financial transactions (Morgan, Bapat and Kobayashi, 2014; Hufbauer et al., 2007). The goal of this intended economic pain is to convince the target to alter its policies that are against senders' interests. However, sanctions often lack the ability to impose significant costs due to target's ability to adjust. Targeted governments can offset the costs of sanctions through black market activity (Andreas, 2005; Niblock, 2001), substitution (Peksen and Peterson, 2015), and sanctions-busting (Early, 2011, 2015).

Targeted governments are not the only actors that look for alternative sources of economic gain when faced with sanctions. The imposition of sanctions affects the revenue streams of the private firms in the sender country as well. These firms also start looking for alternative sources of profit when their home governments (senders) restrict their exchanges with their international partners (targets). In fact, Lektzian and Biglaiser (2013) show how U.S. sanctions lead to disinvestment by U.S. firms in target countries and Barry and Kleinberg (2015) complement this finding by demonstrating that U.S. firms increase foreign direct investment (FDI) in third states that can provide indirect access to the target country's economy.

In this chapter, I explore the conditions under which U.S. firms choose to invest or re-invest in the targeted countries following sanctions removal. I argue that the decision to end sanctions provides a signal to the multinational corporations (MNCs) of the sender country that the relations between their home state (the sender) and the potential host state (the target) are normalizing and the business environment of the targeted country is becoming more favorable for future investment. Even if this signal is an indication of lucrative opportunities for private firms, the uncertainty remains about the possibility of sanctions recurrence. How do private firms decide whether to invest in markets that were previously sanctioned by their home governments? I answer this question by analyzing private investors' ex ante assessment of sanctions recurrence.

I argue that FDI flows from U.S. firms into economies previously targeted with U.S. sanctions are higher in cases where the expected likelihood of sanctions recurrence is low. To assess the risk of sanctions recurrence, firms seek information from both their home government (the sender) and the host government (the target). First, firms evaluate the likelihood of foreign policy continuity in their home state by observing the domestic politics. I argue that if the leader who ended sanctions continues to stay in office following sanctions removal, or his predecessor represents the same political party, this serves as a credible signal to firms that the risk of sanctions recurrence is low. If, however, a new president takes office who is from a different political party than his predecessor, foreign policy reversal and sanctions recurrence become a real risk. In these cases, I show that the firms' investment decisions is based on the public support the new leader enjoys and the relationship between approval ratings and FDI inflows is curvilinear for these new leaders. Second, firms observe the outcome of sanctions to infer the risk of sanctions recurrence. I demonstrate that FDI inflow into target countries from senders' firms increases in the aftermath of sanctions removal if sanctions ended with complete target acquiescence or sender capitulation, a decisive outcome.

Sanctions and Foreign Direct Investment

The existing literature on international capital flows provides strong evidence that markets characterized by risk find it difficult to attract FDI. The high sunk costs, relatively lower mobility, and the long-term nature of foreign direct investment imply high costs for exiting markets for investors (Jensen, 2008). Therefore, firms are wary of uncertainty in host markets and look to invest in countries that can minimize these risks. The risks that firms attempt to minimize are often political in nature. Fear of expropriation and breach of contracts (Markusen, 2001; Li, 2009), risk of domestic political unrest (Braithwaite, Kucik and Maves, 2014), presence or anticipation of internal or external armed conflict (Bussman, 2010; Jensen, 2008; Busse and Hefeker, 2007), and regime instability (Li and Resnick, 2003; Tomashevskiy, 2017) are known to inhibit investment in host countries. Firms' FDI location decisions are directly influenced by assessment of these risks.[40]

[40]Firms also weigh these risks against economic benefits provided by host economies. Market size, trade and capital openness, development, and economic growth are known to encourage FDI in a given country. Also See Li (2006) for a discussion of tax and non-tax incentive programs adopted by host governments designed to attract foreign capital.

Even if the majority of the FDI determinants literature focuses on host characteristics, a few studies investigate home government-host government relations that influence firms' investment decisions (Li and Vashchilko, 2009; Leblang, 2010; Biglaiser and DeRouen, 2007). A factor that is often overlooked in the political economy literature about investor risk calculation is the presence of economic conflict between home governments and potential hosts, or the expectation of it. Economic sanctions increase the risks associated with commercial relations with host states, making some investors reluctant to do business with and invest in economies targeted with economic sanctions. In some sanctions cases, the sender can directly block its firms from engaging in any economic exchanges with the target country and threaten to prosecute companies that do not comply with the restrictions. U.S. sanctions imposed on Cuba, North Korea, Iran, or Libya are examples of such comprehensive sanctions. It is true that such comprehensive sanctions are not common, and senders rarely include legal provisions in their sanctions acts that restrict the activities of their domestic firms. Moreover, the ability of senders to domestically enforce sanctions can be limited (Bapat and Kwon, 2015), and governments can even be incentivized not to strictly enforce sanctions due to their potential harm on domestic firms' competitiveness in international markets (Morgan and Bapat, 2003). However, firms' risk assessment about investing in targeted countries is not only influenced by the increased risk of facing punishment from their home government.

Economic sanctions can also indirectly hurt investors and discourage FDI in targeted countries by limiting firms' ability to profit. First, sanctions can restrict trade with the targeted country, thereby limiting MNCs' ability to export goods to their home country or into the international markets. Second, sanctions are known to have disproportionate economic impact on citizens of the targeted country rather than the leadership (Drury and Li, 2006; Lopez and Cortright, 1997). Therefore, sanctions can hurt the ability of the consumers of the targeted country to buy goods and limit the opportunities of MNCs in the target country, especially the ones that was attracted to the host country due to its market size. Third, economic sanctions can lead to the elimination of incentives from the sender government to its MNCs. For instance, Export-Import Bank (EIB) and the Overseas Private Investment Corporation (OPIC) are two U.S. government agencies that support MNC activities abroad. The EIB offers loans for borrowers to purchase U.S. MNC goods operating in the borrower's country and the OPIC offers risk insurance to U.S. MNCs. As discussed by Biglaiser and Lektzian (2011), sanctions are likely to limit the support and incentives that the U.S. government provide to

its firms operating in the targeted countries, thereby increasing the costs of their investment. Lastly, sanctions can have adverse effects in the target country which then can intensify the political risks that MNCs are wary of. Economic sanctions increases repression and political violence in target countries (Allen, 2004; Wood, 2008), deteriorate private property rights (Peksen, 2017), and destabilize leaders politically (Marinov, 2005; Escriba-Folch and Wright, 2010). These demonstrated adverse effects of economic sanctions exacerbate the risk perception of investors. For these reasons, the presence or the expectation of economic sanctions may cause firms of the sender country to disinvest from the targeted countries.

Biglaiser and Lektzian (2011) empirically show that U.S. investors pull out of countries targeted by U.S. sanctions, especially when sanctions impose major costs to the target's economy and the U.S. pursues major policy goals with a stronger incentive to enforce sanctions domestically. Barry and Kleinberg (2015) complement this finding and show that U.S. firms shift investment to states that can provide indirect access to the target country's economy, such as the major trading partners of the sanctioned country.

Sanctions Removal and Foreign Direct Investment

However, once sanctions are lifted, the economic environment of the targeted economy begins to look more favorable for foreign investors of the sender country. First, it becomes legal to invest in the previously targeted economy and MNCs' risk of being penalized by their home government for investing in the target's economy disappears. More importantly, sanctions removal provides new lucrative economic opportunities for private investors and firms. These opportunities often arise due to the access to a new market and the targets' potential to grow its economy in the absence of sanctions. Moreover, the reward in investing in previously targeted economies might be higher shortly after the removal of economic sanctions, since early investors can avoid competition and thus have proprietary access to lucrative contracts (Appel and Loyle, 2012). Overall, the decision to end sanctions sends a positive signal to MNCs and private investors about the future of the home government-host government relations, as well as the improving business environment of the previously targeted economies. Therefore, sanctions removal can promote investor confidence, and targets can become attractive locations for MNCs to invest or re-invest.

In addition to the lucrative opportunities previously targeted nations may offer, they also pose considerable risks for investors. One of the main risks that investors need to account for is the likelihood of sanctions recurrence. Investors consider the threat of disinvestment when they invest (Tomashevskiy, 2017), and the risk of sanctions recurrence should affect MNCs' investment decisions in previously targeted countries. Therefore, the question is, whether the decision to end sanctions can give confidence to MNCs about the long-term safety of their potential investments in the target's economy.

In an uncertain environment about the safety of their investments, firms tend to withhold investment until uncertainty regarding the future of their investment is eliminated (Rodrik, 1991). Forward-looking investors are concerned about minimizing the risk of disinvestment, and therefore, they seek commitments to ensure that their investments will be safe in the long-run. I argue that investors attempt to minimize their risk by seeking credible commitments both from their home government and host governments that sanctions will not be put back on, and sender-target relations continue to strengthen in the years following sanctions removal.

First, firms look for cues about foreign policy continuity from their home government, by specifically observing the developments in domestic politics. Investors dislike political uncertainty about future policies of their home governments, especially the ones that will directly affect their financial situation, business environment, and investment decisions (Frot and Santiso, 2013). To reduce this political uncertainty, I argue that investors observe two main sources of information to assess the likelihood of sanctions recurrence. First, they observe whether or not the leader in power shares the foreign policy views of the leader that ended sanctions. Second, they observe the level of public support the leader enjoys. The first short-cut captures the leader's potential *intent* for policy reversal, and the second short-cut captures the *ability* of the leader to reverse course in foreign policy.

The political uncertainty, thus the uncertainty about sanctions recurrence, is expected to be very low if the same leader continues to govern the country in the aftermath of sanctions removal. As discussed more in detail in Chapter 3, leaders favor foreign policy continuity during their tenure since foreign policy inconsistency is often perceived as evidence of incompetence by the public (Tomz, 2007; Kertzer and Zeitzoff, 2017). Reinstating the very same sanctions they lifted would inevitably signal foreign policy inconsistency and incompetence for leaders. Moreover, the decision to renew sanctions can send the signal that the initial decision to end sanctions was a mistake. Relying on this

logic, firms can be fairly confident that the relations of their home government with the target state will continue to improve in the aftermath of sanctions removal and the normalization process will not be interrupted by sanctions recurrence. Therefore, I argue that firms are more likely to invest in previously targeted countries if the leader who made the decision to end sanctions continues to remain in office.

However, firms' political certainty may not last for an extended period of time, especially in democracies where leader turnover is common with normal elections. Elections are a common source of political uncertainty for firms. Markets react negatively in the prelude to elections due to uncertainty such contests create (Pantzalis, Strangeland and Turtle, 2000; Frantz, 2018). And sometimes, upcoming elections, and the political uncertainty they create encourage individuals or businesses to delay or reduce certain types of investment until the race concludes (Canes-Wrone and Park, 2014; Julio and Yook, 2012). Therefore, election results are an important source of information for firms considering investing in countries previously targeted with sanctions and assessing the risk of sanctions recurrence.

If the leader who ended sanctions gets reelected for a second term, the election outcome does not necessarily create fear for firms about foreign policy discontinuity and the likelihood of sanctions recurrence. Similarly, if a new leader takes office in their home country, but this new leader is from the same political party as his predecessor, firms can perceive this as a signal of foreign policy continuity and a low chance of sanctions recurrence. However, if the election brings a new leader to power and the new leader is from a different political party than his predecessor who ended sanctions, firms' political uncertainty heightens. Since the new leader with a different political affiliation represents a different societal base with distinct preferences, he might be incentivized to reverse his predecessors' foreign policies and renew sanctions.

Overall, observing the leader of the country, his political affiliation and societal or interest groups he represents provide information to firms about the leader's potential intent for renewing sanctions. However, not all new leaders will be able to reverse the foreign policies of their predecessor and renew sanctions. Firms need to distinguish between leaders that are more likely to renew sanctions than the leaders that are less likely to do so. To this end, the second source of information MNCs use to assess the likelihood of sanctions recurrence is the level of public support the new president enjoys.

More specifically, I propose a curvilinear relation between the new president's approval ratings and the levels of FDI that the target state can attract following sanctions removal. If the new leader is from a different political party than his predecessor that ended sanctions, and the new leader is highly popular, reversing his predecessor's policies and renewing sanctions are expected to be a relatively easy task. First, presidents that enjoy high approval ratings are often more capable of pushing forward their agenda than the presidents that are less popular. Presidential approval is assumed to serve as a proxy for voter preferences (Edwards, 1997), which may have representational implications (Cohen and Rottinghaus, 2018). Due to this, presidents with high approval ratings tend to have strong legislative support (Canes-Wrone and Marchi, 2002; Canes-Wrone and Shotts, 2004). Therefore, if the new president with high approval ratings chooses to renew sanctions through the legislative body, firms should expect that they can.

On the other hand, If the new leader that is from a different political party than his predecessor has low levels of approval ratings, firms might also perceive a high risk environment for sanctions recurrence. Leaders are driven by the desire to remain in office (Bueno de Mesquita et al., 2005; Huth, 1996) and they view approval as an asset and disapproval as a political cost (Edwards, 1997). Therefore, leaders seek policies, including foreign policies, that will bolster their public support and increase the chances of political survival.

The diversionary foreign policy literature often focuses on how bold foreign policy can be used by presidents to combat declining performance evaluations (DeRouen, 2000). However, this requires the availability of a foreign affairs issue on which the new leader can capitalize so as to offer a portrait of strength (Druckman, Jacobs and Ostermeier, 2004). A recent removal sanctions can serve as such an opportunity for new leaders. Moreover, criticizing the previous administration's foreign policies and reversing these policies can serve as a tool for new leaders to differentiate themselves from their predecessor and solidify their base (Hermann, 1990).

Contrary to the presidents that enjoy high approval ratings, unpopular presidents often struggle to convince the Congress, or the legislative bodies in parliamentary democracies, to carry out their agenda (Rivers and Rose, 1985; Brule, 2008). Therefore, despite the incentives low approval ratings create to renew sanctions, it might be hard to pass the decision from the legislature. However, sanctions can also be imposed unilaterally by the executive body in many democracies. And such

presidential unilateralism is more common for leaders that has relatively lower approval ratings (Beckmann, 2010; Mayer, 1999; Shull, 2006).

In sum, firms assess the safety of their long-term investments in targeted nations by assessing the likelihood of sanctions recurrence. To do so, domestic politics of their home government serves as a source of information about the safety of their investments. While the leaders that share the foreign policy views of the leaders who ended sanctions give confidence to firms about the safety of their investments, new leaders with a different foreign policy view may not be able to provide the same level of assurances. I argue that their ability of assure firms depends on the level of public support they enjoy as a proxy of their ability to reverse their predecessor's foreign policies. New leaders with high or low approval ratings are expected to signal a high likelihood of sanctions recurrence to firms. In these cases, firms are expected to be cautious against investing in the countries previously targeted with economic sanctions. However, moderate levels of presidential public support may not be very informative for private investors in the sender country about the likelihood of sanctions recurrence. This leads to the following hypothesis:

H1: *FDI flow from the sender country to the target country is likely to be lower following sanctions removal when a new leader with different policy preferences than his predecessor who ended sanctions takes office and when this new leader has high or low approval ratings.*

In searching for cues about the likelihood of sanctions recurrence, firms also observe how the initial sanctions ended. Firms are profit-driven entities and thus, when making decisions about investing in previously targeted economies, they are primarily interested in profit. To this end, I argue that they seek assurances that sanctions will not recur. They are, however, not concerned about whether the sanctioning effort was successful for their home government in altering the behavior of the target state. It is true that if sanctions ended with a complete target concession, firms can take this as a signal of lower risk sanctions recurrence due to lower perceived risk of target recidivism. However, I argue that sanctions ended with complete sender capitulation send the same signal as complete target acquiescence. The commonality between a complete target acquiescence and sender capitulation from the perspective of firms is the fact that the outcome is definitive. However, the cases that ended with only a partial concessions by the target, or a negotiated settlement, are expected to be more prone to recurring. Therefore, I argue that firms consider the target state as a relatively safe

host government to invest if the sanctions episode involving them ended with a definitive outcome. This leads to the following hypothesis:

H2: *FDI flow from the sender country to the target country is likely to be greater following sanctions removal when initial sanctions end with complete target acquiescence or sender capitulation.*[41]

Data and Research Design

To test my hypotheses, I create a time-series cross-sectional dataset where sanctions episodes enter into the dataset once they have been lifted. The sender-target dyad of each case is observed for 10 years following the removal year of sanctions. The unit of analysis is dyad-year for the aftermath of each security related sanctions episode. The analysis covers the years between 1966-2001. Data on economic sanctions is available for the years between 1945 and 2005, however, the availability of FDI data limits the temporal scope of the analysis.

In line with the research designs used for previous chapters, I limit my focus to security-related sanctions.[42] Trade-related sanctions are imposed due to the target's trade practices or economic policies and tend to be less severe. More importantly, previous research has shown that trade sanctions often do not cause firms based in the sender country to withdraw from or withhold investment into the targeted countries (Biglaiser and Lektzian, 2011). Therefore, the theory presented in this chapter is not applicable to trade sanctions and their exclusion is appropriate.

I also limit the analysis to the aftermath of sanctions imposed and lifted by the United States for three main reasons. First, the U.S. government collects data on private firms' activities abroad and makes it public. More importantly, this data reports bilateral FDI flows and allows me to capture US FDI inflow into specific target countries. Second, the U.S. is the most active sender identified in the TIES dataset. There are 358 unique sanctions cases that were imposed and lifted between the years 1945 and 2013, and 215 of those cases were primarily imposed and lifted by the United States,

[41] In theory, this relationship can also be expected to be conditional upon the domestic politics of the home government. I aim to explore the link between the two hypotheses by examining how firms assess the outcome of initial sanctions differently for different leaderships in the country.

[42] Containing political influence and military behavior, destabilizing regimes, demanding the release of citizens or property, solving territorial disputes, denying strategic material, retaliating for alliance choices, demanding human rights improvements, ending weapons proliferation, terminating support of non-state actors and punishing drug trafficking are considered as security-related goals.

accounting for 60 percent of the cases. Third, the U.S. occupies a unique position in the global economy as the largest investor of FDI. For instance, in 2016, Hong Kong, the United Kingdom, Japan, and Germany rank as the next largest overseas direct investors, with individual outward investment positions about one-fourth or less than that of the United States (Jackson, 2017).

To identify the set of cases imposed and lifted by the United States, I rely on the "primary sender" variable of the TIES Dataset. A primary sender is coded as the state that proposes sanctions or is responsible for mobilizing other states to initiate sanctions. These cases are not solely unilateral sanctions imposed by the U.S. and the sample includes multilateral cases, cases that are initiated through international institutions, and the cases that has multiple senders, where the U.S. is coded as the "primary sender."[43]

Finally, I use the approach adopted in Chapter 3 to account for sanctions episodes with no recorded end dates in the TIES Dataset. Specifically, I use the information on the year of the last reported incident provided by the TIES Dataset. The variable named *ongoing as of year* identifies the last year in which the data collectors were able to obtain information on the case and no further information about the case was found. I treat the year after the *ongoing as of year* as the end year and construct post-sanction years for the years following that end date. In the sample limited to U.S. sanctions, there are 16 cases with no recorded end dates and dropping them out of the analysis would result in a loss of valuable information.[44]

Dependent Variable

The dependent variable in this study is the net yearly U.S. FDI inflow into the target country in the aftermath of sanctions removal. I use the data from the Bureau of Economic Analysis (BEA) for the years between 1966 and 2000.[45] The BEA Data measures the net capital outflow data in current US dollars, consisting of funds that US parent firms provide to their foreign affiliates net of funds that foreign affiliates provide to their US parents. The dependent variable, *FDI Inflow*, is

[43] 58 of 215 cases where the U.S. is coded as the primary sender are multilateral, while the remaining 157 cases are unilateral.

[44] It is important to note that they are dropped for the analysis to test Hypothesis 2, since the cases with no end dates also do not have a record of sanctions outcome.

[45] The Bureau of Economic Analysis. U.S. Direct Investment Abroad: Balance of Payments and Direct Investment Position Data. Retrieved from: https://www.bea.gov/international/di1usdbal.htm

coded as a target country's net FDI inflow from US-based private investors in a given year following sanctions removal. It is a continuous variable ranging from -4601 to 16428 in millions of current U.S. dollars. The distribution of the variable is highly skewed. To address this problem and smooth the distribution, I use an inverse hyperbolic sine (IHS) transformation.[46]

Independent Variables

To test Hypothesis 1 and operationalize the expected probability of foreign policy continuity, I use two main measures, mapping onto the two main cues that firms seek. To capture the *intent* of foreign policy reversal, I borrow *Change in Source of Leader Support* variable from Chapter 3, coded using the CHISOLS dataset (Mattes, Leeds and Matsumura, 2016). It is a dichotomous variable coded as 1 if the sender country, the U.S. for the purposes of this chapter, has a new leader in a given post-sanctions year that belongs to a different political party than his predecessor who lifted sanctions. The variable is coded as 0 either if the leader who ended sanctions is still in power or if the new leader that replaced him has the same political affiliation.[47] For instance, if a Republican president ends sanctions, the variable is coded as 1 for all the years in which a Democrat president is in office and as 0 for all the years in which a Republication president is in office.[48]

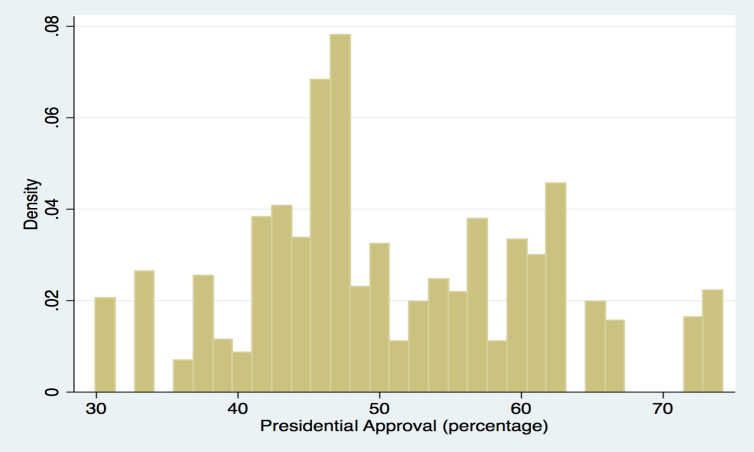
Second, I use a measure to capture the level of public support a given president enjoys as a proxy of his ability to renew sanctions. To code the *Presidential Approval* variable, I use the "Presidential Job Approval Data" compiled by the Gallup Poll and published by the American Presidency Project (Woolley and Peters, 1999). The job approval percentages are recorded in response to the "Do you approve or disapprove of the way [first and last name of the president] is handling his job as President?" The respondents choose between "Approve", "Disapprove", and "Unsure" in response to

[46] See Appendix C for descriptive statistics and histogram of the FDI data, the transformed FDI data and more information of the computation of the IHS transformation.

[47] Not all sanctions are imposed by the President. The Congress has been an active actor that devises and implements sanctions policies. Therefore, indicators such as executive-legislative unity and the political composition of the Congress can also be influential in firms' risk assessments following sanctions removal. Future work should consider the role of these legislative actors in signaling foreign policy continuity or discontinuity to private firms.

[48] The variable is distributed across the sample fairly evenly. It is equal to 1 in 47 percent of the observations and to 0 in the remaining 53 percent.

Figure 7: Histogram of *Presidential Approval*



the question and I use the approval percentages.[49] Figure 1 presents the distribution of the variable in my dataset.

To capture the expected curvilinear effect of presidential approval on foreign direct investment flows, I compute the squared term of *Presidential Approval*. To test the expectation that this curvilinear relationship exists for new leaders that represent a different societal coalition from the leader that ended sanctions, I introduce a three-way interaction by interacting *Change in Leader Support Variable* with the squared *Presidential Approval* variable.

To test Hypothesis 2, I use the *Final Outcome* variable recorded in the TIES Dataset. The TIES Dataset codes five distinct outcomes for imposed sanctions: partial acquiescence by the target, complete acquiescence by the target, capitulation by the sender, stalemate, or a negotiated settlement. I code *Decisive Final Outcome* variable as 1 if the sanctions ended with complete target acquiescence or capitulation by sender after imposition, and 0 for the other three outcomes.

Control Variables

I include several other predictors of FDI flows that may confound the estimates if omitted. I group the control variables into three categories: targets' economic characteristics, political characteristics, and home-host state relations.

[49] Unsure and No Data categories are reported together in one variable and the value of the Unsure/No Data variable ranges from 3 percent to 22 percent. In the analysis presented here, I use the approval percentages. However, I acknowledge that a 50 percent approval rating with a 3 percent unsure/no data and a 50 percent approval rating with a 22 percent unsure/no data can be substantively distinct.

Macroeconomic Conditions and Economic Incentives

Capital account openness is known to be an important driver of private investment (Coan and Kugler, 2008). To capture this, I first include a measure of the degree of the target's capital account openness, using the index introduced by Chinn and Ito (2006). Higher levels of *Financial Openness* indicate lower levels of restrictions on the target's external accounts.

The literature FDI determinants has also established that states with larger markets and higher levels of economic growth attract higher levels of FDI (Caves, 2007; Chakrabarti, 2001; Asiedu, 2006). I control for the target's population size as an indicator of its market size, using data from Gleditsch (2002). I take the natural logarithm of this variable to smooth its distribution. Next, I measure *Economic Growth* as the percentage change in the country's GDP from the previous year, taken from the World Bank's World Development Indicators.[50]

Home-Host State Relations

Next, I include two variables that control for the economic relations between the U.S. (firms' home state) and the target countries (host states). *U.S. Distance* variable measures targets' total geographic distance from the United States, generated using EUGene (Scott and Stam, 2000). I expect the variable to be negatively associated with FDI flow into target countries, since more distant markets may be generally less accessible for U.S. firms and the operations in distant areas can be more costly (Guerin, 2006). Second, I control for the dyadic trade between the U.S. and the target state in a given post-sanctions year, using COW's Bilateral Trade Dataset (version 4.0) (Barbieri and Pollins, 2009; Barbieri and Keshk, 2016).

Political Characteristics

As a final set of control variables, I control for the political characteristics of the potential host countries. The literature on the link between FDI activity and the regime type of host countries presents mixed findings. However, excluding indicators of regime type from the analysis may confound the results. I specifically control for the *Executive Constraints* variable of the Polity IV

[50]The World Bank, World Development Indicators (2016). GDP Growth (annual %). Retrieved from https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG.

data (Marshall, Jaggers and Gurr, 2013). Leaders that have more institutionalized constraints on their decision-making powers might be better equipped to send more credible signals to investors about the respect for property rights and contractual obligations. The *Executive Constraints* variable is an ordinal variable ranging from 1 (unlimited executive authority) to 7 (executive parity or subordination).[51] Second, I control for the targets' regime durability. This variable is also taken from the Polity IV data and measures the number of years since the target state has shifted three or more points on the Polity scale within a three-year span.[52] Higher values of *Executive Constraints* and *Regime Durability* are expected to be associated with higher levels of FDI inflow to the target countries following sanctions removal.

Finally, I add a lagged dependent variable ($FDIInflow_{(t-1)}$) as a regressor in the models. FDI inflow data exhibits a high degree of temporal correlation; investment levels in $t-1$ are a powerful predictor of levels in year t. The inclusion of the lagged dependent variable aims to correct for this temporal dependency.

Methodology

All models are estimated using Ordinary Least Squares (OLS) regression with robust standard errors as a caution against heteroskedasticity. Moreover, to account for the time it takes for investors to select a host and execute their investment decisions, I lag all independent variables by one year. This also allows me to reduce the risk of endogeneity bias.

Results

Table 1 presents the results of the models used to test Hypothesis 1. The main variable of interest is the interaction between *Change in Leader Support* and the squared term of *Presidential Approval*. Overall, I estimate four equations based on different sets of control variables. I first estimate the baseline model only with the main independent variables of interest along with the lagged dependent variable and temporal controls. Next, I add control variables that captures targets'

[51]The correlation between *Executive Constraints* variable and a binary that captures whether or not a target state is a democracy, using polity2 score of a 6 and above as the democracy threshold, is 0.89 in my dataset.

[52]The results remain the same when I use the regime durability variable coded by Cheibub, Gandhi and Vreeland (2009), accounting for the number of years the current regime has operated under the same institutional arrangement.

economic characteristics that might influence firms' investment decisions. I then add control variables to account for U.S.-host government relations. Finally, I estimate a full equation with all control variables, including the ones that capture targets' political characteristics.

Table 4: The Effect of Assessed Likelihood of Policy Continuity on Net FDI Inflows in Target States

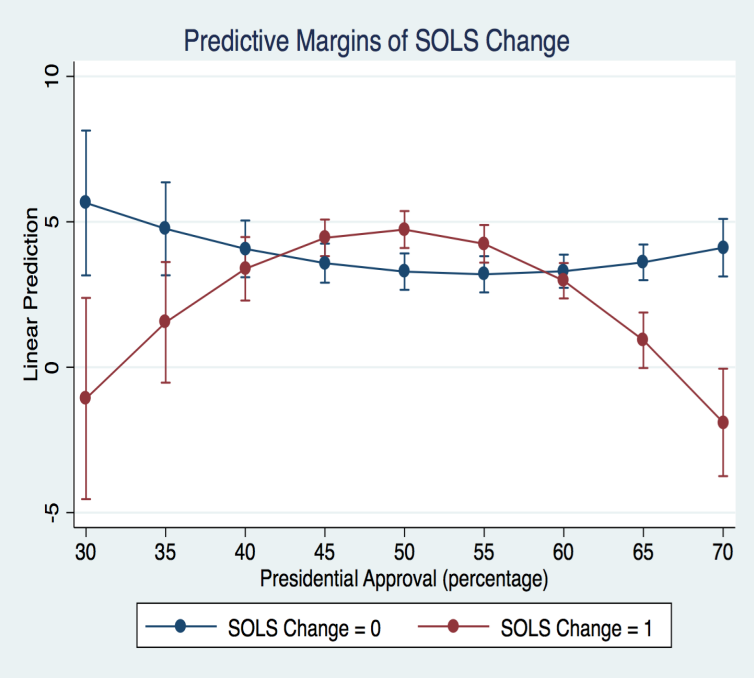
DV: Net FDI Inflow	Model 1	Model 2	Model 3	Model 4
Change in Source of Leader Support	-39.795**	-43.164**	-44.496**	-48.285***
	(13.01)	(14.04)	(13.65)	(14.28)
Presidential Approval	-0.505	-0.588*	-0.504	-0.436
	(0.27)	(0.29)	(0.28)	(0.29)
SOLS Change x Presidential Approval	1.599**	1.752**	1.833***	1.971***
	(0.50)	(0.54)	(0.52)	(0.54)
Presidential Approval^2	0.005	0.005*	0.005	0.004
	(0.00)	(0.00)	(0.00)	(0.00)
SOLS Change x Presidential Approval^2	-0.016***	-0.017***	-0.018***	-0.020***
	(0.00)	(0.00)	(0.00)	(0.01)
FDI Inflow$_{t-1}$	0.352***	0.247***	0.165***	0.155***
	(0.04)	(0.04)	(0.05)	(0.05)
Financial Openness		0.616***	0.301*	0.332*
		(0.14)	(0.15)	(0.15)
Population (ln)		0.455***	0.282	0.302
		(0.12)	(0.17)	(0.17)
Economic Growth		0.090*	0.117**	0.121**
		(0.04)	(0.04)	(0.04)
US Distance			-0.000*	-0.000**
			(0.00)	(0.00)
US Trade			0.636***	0.643***
			(0.14)	(0.16)
Executive Constraints				-0.002
				(0.09)
Regime Durability				-0.007
				(0.01)
Count of Post-Sanctions Years	1.844	2.220	2.135	2.240
	(1.38)	(1.50)	(1.45)	(1.49)
Constant	13.262	6.892	4.287	2.163
	(7.30)	(7.90)	(7.71)	(7.96)
N	590	521	521	504
Adjusted R-squared	0.15	0.19	0.24	0.23

- Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
- Estimates are derived from an OLS model with robust standard errors.
- Temporal controls are omitted.

The coefficient estimate for *Change in Source of Leader Support* is negative and statistically significant across all model specifications. This suggests that U.S. firms invest less in the target

country following sanctions removal for the years in which the U.S. has a new president that belongs a different political party than the leader who ended sanctions. Similarly, the coefficient estimates for the interaction between the *SOLS Change* variable and *Presidential Approval*, as well as the interaction between *SOLS Change* variable and the squared term of *Presidential Approval* are statistically significant across all model specifications. However, the coefficients and their standard errors presented in Table 1 are not informative to interpret the conditional and substantive effects of the main variables of interest due to the inclusion of the three-way interaction term in the models. Therefore, I calculate the marginal effects of *Change in Leader Support* across the observed range of *Presidential Approval*. Figure 2 presents the marginal effects and the curvilinear relationship between the presidential approval and the amount of foreign direct investment sent to target countries from U.S. firms.

Figure 8: Predictive Margins - Interpreting the Three-way Interaction Term



The x-axis represents the observed range of the *Presidential Approval* variable, while the y-axis represents the net FDI inflow into the target countries from the U.S. in the years following sanctions removal. The blue line represents the results for the years in which the leader who ended sanctions remains in power or the new leader who takes office is from the same political party as the predecessor that ended sanctions. The red line represents the results for the years in which the U.S. has a new

president that represents a different political party than the leader that ended sanctions in the years following sanctions removal.

First, let me analyze the results for the cases where *SOLS Change*=0, presented by the blue line. As expected, the flat line suggests that the levels of FDI inflow into the target countries does not vary substantially by the approval ratings of the president and is always positive. In other words, if the leader who ends sanctions continue to remain in office or a new leader that represents the same political party takes the office of Presidency in the United States, this gives U.S. firms confidence that sanctions will not recur.

The red line depicting the results for the cases where *SOLS Change=1* demonstrates the curvilinear effect proposed in Hypothesis 1. For the cases where *Presidential Approval* is very low or very high, the net FDI inflow from U.S. firms into target countries are significantly lower than the inflow from U.S. firms into target countries for the cases where *SOLS Change=0*.

Taken together, the results provide partial and preliminary support for Hypothesis 1; however, the results are not very conclusive. For instance, the levels of presidential approval that depicts a statistically significant difference between the cases where *SOLS Change=0* and *SOLS Change=1*, are outliers in the data. Moreover, the statistical difference for the lower levels of presidential approval holds only for the very lower end of the spectrum. The future drafts of this chapter will aim to improve the statistical test in order to obtain more robust support for the hypothesis. My plans about how I can achieve this goal are outlined in the concluding section of this chapter.

Table 2 presents the results to test Hypothesis 2. The main variable of interests is *Decisive Final Outcome*. Similar to the analysis presented in Table 1, the control variables are introduced on top of the baseline model in steps in each model. Across all four equations, I find that when economic sanctions end with complete target acquiescence or sender capitulation, the target attracts higher levels of FDI from U.S. firms, compared to cases that end with only partial concessions by the target, a negotiated settlement, or a stalemate. Moreover, when we compare the size of the coefficient estimate of the *Decisive Final Outcome* with the coefficient estimates of all other control variables that are known to be associated to attract FDI, we see that the coefficient estimates of the *Decisive Final Outcome* variable is the largest, indicating a larger substantive effect on the net inflow into target states from the United States.

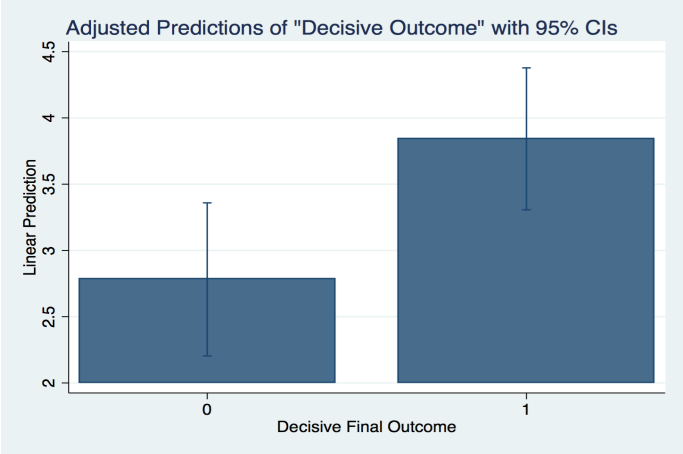
Table 5: The Effect of Sanctions Outcome on Net FDI Inflows in Target States

DV: Net FDI Inflow	Model 1	Model 2	Model 3	Model 4
Decisive Final Outcome	1.105**	1.135**	1.177**	1.060*
	(0.37)	(0.40)	(0.40)	(0.41)
FDI Inflow$_{t-1}$	0.328***	0.221***	0.165***	0.149**
	(0.04)	(0.05)	(0.05)	(0.05)
Financial Openness		0.607***	0.324*	0.406*
		(0.14)	(0.16)	(0.17)
Population (ln)		0.491***	0.394*	0.414*
		(0.13)	(0.18)	(0.18)
Economic Growth		0.083	0.104*	0.106*
		(0.04)	(0.04)	(0.04)
US Distance			-0.000**	-0.000*
			(0.00)	(0.00)
US Trade			0.445**	0.478**
			(0.15)	(0.16)
Executive Constraint				-0.006
				(0.10)
Regime Durability				-0.012
				(0.01)
Count of Post-Sanctions Years	1.299	1.731	1.739	1.872
	(1.43)	(1.53)	(1.50)	(1.54)
Constant	0.417	-8.878**	-9.421**	-9.796**
	(2.31)	(3.26)	(3.34)	(3.44)
N	542	483	483	467
R-squared	0.13	0.18	0.21	0.20

- Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
- Estimates are derived from an OLS model with robust standard errors.
- Temporal controls are omitted.

Figure 3 presents the finding visually. While the x-axis presents the range of the binary variable *Decisive Final Outcome* variable, the y-axis represents the predictions for the net FDI inflow into target countries, holding all other control variables at their means. The bar on the left portrays the results for the cases that ended with partial target concessions, negotiated settlement, or a stalemate; whereas the bar on the right portrays the results for the cases that ended with complete target consessions or sender capitulation. The difference between the heights of the two bars is equal to the coefficient estimate for *Decisive Final Outcome* presented in Table 5.

Figure 9: Predictive Margins - *Decisive Final Outcome*



Lastly, assessing the control variable provides additional insights on the determinants of FDI inflow into countries previously targeted with economic sanctions. The findings for most of the control variables that capture the macroeconomic conditions in the target state and the economic incentives they can offer to firms are in line with the existing literature on FDIs. Target countries that are more financially open, have a relatively large population, and grows economically attract more FDI than the target countries that have a relatively closed financial system, smaller population size, and experience an economic stagnation. Similarly, targets that are geographically closer to the United States and targets that have higher levels of trade with the U.S. following sanctions removal are more desirable locations for FDI for U.S. firms.

The variables that capture the political characteristics of the sender, however; do not achieve statistical significance. This is not surprising given the conflicting theories and incongruous findings in the literature about the impact of regime type and regime stability on FDI inflows. Some scholars

argue that democracy promotes FDI due to their stability, transparency or lower changes of conflict. However, some other scholars argue that democracy can increase political risk for private firms due to the frequent change in government via normal elections, the ability of competing interest groups to influence government policy or higher labor or environmental standards.[53] Therefore, I conclude that *Executive Constraints* and *Regime Durability* variables are not significant determinants of the level of investment by U.S. firms in target countries.

Conclusion and Future Directions

Targets of economic sanctions might benefit from an increasing flow of foreign investment in the aftermath of sanctions removal; yet, they may struggle to signal to potential investors that their long-term investments will be secure. In this chapter, I argue that firms find it risky to invest in countries shortly after sanctions end due to the perceived risk of sanctions recurrence. I suggest that firms base their investment decisions on two main indicators. First, they observe the domestic politics of their home governments closely to gauge the likelihood foreign policy continuity. I argue that the most important domestic factor that gives confidence to firms is whether or not the leader who ended sanctions, or a new president that shares his predecessor's foreign policy views is in power. For the cases where the a new societal coalition becomes influential in the home country, firms observe the level of public support the new leader gets and assess the ability of the new leader to reverse his predecessor's policies. In addition to these domestic factors, firms also observe how sanctions ended, and look for a definitive outcome as an assurance.

Even if the findings presented above lends some support for these expectations, they are not conclusive and robust. Future work is needed to strengthen the empirical analysis and produce more robust and generalizable results. The first next step to build on this chapter is to use more fine-grained FDI data that is better suited to test the theory presented in this chapter. The theoretical discussion presented above, and the subsequent empirical test, including the measurement of the dependent variable, are based on an assumption that is widely common in the FDI literature: FDI is a risky form of investment due to its low exit mobility, high sunk-costs, and long-term nature. However, FDI activities vary significantly based on the resource commitments of parent firms, level of control,

[53] See Franzese (2002) for a review of the literature on regime type and FDI.

liquidity, and their exit mobility. For instance, mergers and acquisitions, joint ventures, and greenfield investments are often lumped together in the same FDI measure. However, the logic of investing is different for short term (non-fixed) vs. long-term (fixed) assets (Kerner, 2014; Kerner and Lawrence, 2014). Thus, firms' risk assessments might be different for different forms of investments due to their varying level of mobility and liquidity (Lee, Biglaiser and Staats, 2014).

The theory presented in this chapter is only applicable to forms of investment that are associated with sunk costs, lower mobility, and lower liquidity. Specially, an examination of plant, property and equipment investments of U.S. MNCs abroad, such as the value of physical structures, land, machinery, equipment, and the book value of land, timber, mineral and similar rights owned by the foreign affiliates. This information is available through the BEA; however, it is not structured bilaterally. I aim to use a more nuanced FDI data for future versions of this chapter to better match the theory.

Next, the temporal dynamics of the theory needs to be better tested. For instance, I expect the perception of risk to fade as time relapses with no sanctions recurrence and to drastically heighten with threat of imposition of new sanctions. More theory development is required to capture the dynamism in the process outlined in this chapter, and a well thought research design to model this process.

CHAPTER 5: CONCLUSION

When and how do economic sanctions end? What are the political, economic, and domestic consequences of ending sanctions? This dissertation answers these two questions in three empirical chapters. First, I examine the conditions under which sanctions end. Next, I identify the post-sanctions environment characteristics conducive to sanctions recurrence. Lastly, I analyze firms' investment decisions into countries previously targeted with economic sanctions and identify the conditions under which foreign direct investment inflow to target countries increases following sanctions removal.

This concluding chapter proceeds as follows. The next three subsections summarize the theories and findings presented in each empirical chapter. I discuss the results from individual sections, the theoretical and practical importance of these results, and my future research ideas to extend the work from each chapter. I end this section with a discussion of the contributions of this project as a whole to the sanctions literature and a couple concluding remarks.

When Do Sanctions End?

Chapter 2 theorizes about the process through which sanctions end. I argue that ending economic coercion is profitable for senders, yet potentially risky. Using a game theoretic model, I identify that the imposers of sanctions are often uncertain whether their targets will channel the gains from sanctions relief into their offensive behavior. I show that senders can be willing to risk ending sanctions only if they are confident that targets will not take advantage of peace by posing new security threats. I empirically show that effective international monitoring and attractive economic inducements enable senders to take the risk of economic peace and lift sanctions.

These findings have a few implications for both scholars and practitioners of economic sanctions. First, instead of cutting political ties with target countries, senders should keep investing in international and bilateral political channels to communicate with their targets. Senders often recall ambassadors and limit bilateral and multilateral talks with their targets while sanctions are

in place. However, in Chapter 2, I show that dense information flow between senders and targets facilitate sanctions removal, ensure target compliance, and enable sender to accurately differentiate between sincere and insincere targets during sanctions removal negotiations. Therefore, senders need to devise mechanisms for continued communication and diplomacy with their targets, bilaterally and multilaterally.

Second, the findings suggest that dense information flow between senders and targets facilitates sanctions removal only if it is complemented with attractive economic inducements. From a policy perspective, being able to propose an attractive sanctions relief package is a function of being able to harm the target's economy in the first place. The research suggests that "smart" sanctions, sanctions that are designed to focus their impact on leaders, political elites, or segments of society believed responsible for objectionable behavior (Weiss, 1999; Cortright and Lopez, 2002), can perform better at harming the target so that the proposed sanctions relief can be attractive during sanctions negotiations. Similarly, more recent scholarly and policy discussions on sanctions' ability to impose costs on the target country have started to revolve around financial sanctions. Even if the theoretical and empirical literature on financial sanctions is limited, the recent cases has demonstrated the growing effectiveness of financial sanctions. Therefore, smart sanctions and financial sanctions, in other words, sanctions that have a bite, coupled with dense information flow between senders and targets, can be the recipe for successful sanctions removal negotiations.

I plan to extend the work from this chapter in a number of ways. Mainly, I aim to focus more explicitly on the negotiation process by analyzing the conditions under which negotiations take place and negotiations succeed. Around 40 percent of all economic sanctions imposed between years 1945 and 2005 end with a negotiated settlement, however, the TIES dataset, the most comprehensive dataset available on economic sanctions, only report negotiations that succeed. I intend to gather new data on diplomatic exchanges and negotiation attempts between senders and targets over the course of a sanctions episode and include failed negotiations as well. This new data will allow me to answer interesting questions about when negotiations begin, when they succeed, and how long does it take for success to be achieved.

When Do Sanctions Recur?

Chapter 3 presents a theory about the economic and domestic consequences of sanctions removal and proposes two competing hypotheses about the post-sanctions environment conducive to sanctions recurrence. The first hypothesis suggests that economic sanctions recur if the target takes advantage of sanctions relief and poses new security threats following sanctions removal. The alternative hypothesis suggests that sanctions recurrence is often not a response to the target's behavior, but is primarily driven by domestic politics of the sender country. I find support for the latter hypothesis and empirically show that sanctions are more likely to recur if the leader changes in the sender country following sanctions removal and a different domestic coalition becomes influential.

The work from the third chapter can be extended in a number of ways. First, future work can empirically distinguish between the underlying causal mechanisms of sanctions imposition and sanctions recurrence. In the theory section of the chapter, I theorize about how the decision to end sanctions alter the environment in which senders and targets interact in the aftermath of sanctions removal. Therefore, the theory assumes that the initial onset of sanctions and their recurrence are theoretically distinct. This theoretical assumption can be tested empirically.

Second, target behavior in the long-run needs to be examined. The existing literature on sanctions effectiveness conceptualizes "success" as partial or full acquiescence by the target country to the sender's demands at the time of termination. However, the question about whether sanctions remain to be effective in the long-run is an important question yet to be answered. I propose an alternative conceptualization of sanctions effectiveness. I argue that sanctions are effective only if the target continues to be in compliance with the senders' demands in the long-run, and while having access to sanctions relief. This is a higher bar for success; however, taking target behavior only at the time of termination into consideration might lead to overestimation of sanctions success in the literature.

How Do Firms React to Sanctions Removal?

The last piece of the dissertation continues to examine the aftermath of sanctions removal; however from the perspective of private firms. I argue that economies that were previously targeted with sanctions can be lucrative investment opportunities for the MNCs of the sender country; however, they are also risky investments due to the potential of sanctions recurrence. I show that firms

seek credible assurances both from their home government (the sender) and host governments (the target) that sanctions will not recur and their investments will be safe in the long-run. Specifically, I demonstrate that foreign direct investment inflow into the target country following sanctions removal if the sender government signals foreign policy continuity and if the sanctions episode ended with a definite outcome, such as capitulation by the sender or complete acquiescence by the target.

The work presented in Chapter 4 needs further theory development and improvements in the statistical tests. Most importantly, I need to have a more nuanced theory and empirical test by differentiating between types of FDI. Specifically, the theory should be tailored towards the types of investment with relatively limited mobility and liquidity, as opposed to the forms of investments that are not necessarily sunk costs for the investors. The empirical test should also utilize measures that only captures those assets.

This research also opens the door to future research on economic recovery, an area of interest for both sanctions scholars and practitioners. Foreign direct investment is only one of the many sources of economic recovery for the target countries. Increasing ability to access to international borrowing, participation in bilateral or international trade deals or increase in foreign aid are other potential sources of economic recovery for the targets of economic sanctions and I intend to continue to explore questions related to the consequences of sanctions removal in the target country.

Concluding Remarks

In addition to the theories and findings presented in each chapter, this dissertation as a whole provides several contributions to the economic sanctions literature. First, this project adopts a previously missing theoretical framework to answer the question of "when sanctions end" and analyzes the *process* through which sanctions are lifted, rather than just the *outcome* of sanctions episodes. Second, it opens a door to a future research agenda that examines the economic, domestic, and political implications of sanctions removal in both the sender and the target states, as well as sender-target relations following sanctions removal. Our theories about the sanctioning process, as well as the research designs utilized to understand the sanctioning process often end with sanctions termination. In this project, I highlight the importance of considering the post-sanctions period as an integral part of the sanctioning process and propose a new avenue for research. Post-sanctions economy

recovery, the extent of political normalization between senders and targets, long-term effectiveness of economic sanctions, and target recidivism are only a few of the many areas that scholars can examine in the future by building on the theoretical framework and the findings presented in this dissertation.

Second, this dissertation attempt to bridge the gap between the two strains of research in economic sanctions literature: the bargaining framework of economic sanctions and the domestic explanations of economic sanctions. These two theoretical frameworks, referenced throughout the dissertation, are often viewed as competing explanations of economic sanctions. In this project, I often conceptualized the two theories as complementary. I adopt a bargaining framework to model the strategic interaction between senders and targets, while also accounting for domestic drivers and implications of economic sanctions. More future work is needed to theorize about how the bargaining framework of economic sanctions and an in depth analysis of domestic factors at play in sanctions onset, effectiveness, termination, and the consequences of lifting sanctions.

APPENDIX A: SUPPORTING INFORMATION FOR CHAPTER 2

Supplementary Mathematical Appendix for Chapter 2

The game is solved using the Perfect Bayesian Equilibrium (PBE) Solution concept, which specifies that the players' strategies are sequentially rational given their beliefs, which are calculated using Bayes' Rule. The game consists of two players: a sender (S) and two types of target (T_1, T_2). Nature draws T_1 with probability Ω and T_2 with probability $(1 - \Omega)$. T_1 receives 0 for both keeping and reversing its offensive behavior. T_2 receives 1 for keeping its offensive policy and 0 for reversing it. The sequence of moves is as follows:

1. Nature draws either T_1 or T_2.
2. Both T decide to Negotiate zor $\sim$ Negotiate.
3. If T plays Negotiate, S plays Deal or $\sim$ Deal.
4. If S plays Deal, T plays Comply or $\sim$ Comply.

T's Final Move

Lemma 1: T_1 Comply if $\theta > \frac{1}{2}$.

Proof:

$EU_{T_1}(Comply) = \theta(x - \epsilon) + (1 - \theta)(-\beta_T c_T - \epsilon)$

$EU_{T_1}(\sim Comply) = \theta(-\beta_T c_T - \epsilon) + (1 - \theta)(x - \epsilon)$

T_1 Comply if $\theta(x - \epsilon) + (1 - \theta)(-\beta_T c_T - \epsilon) > \theta(-\beta_T c_T - \epsilon) + (1 - \theta)(x - \epsilon)$. Simplifying in terms of θ:

$$\theta > \frac{1}{2} = \hat{\theta}_{T1} \tag{i}$$

If $\theta = \frac{1}{2}$, $EU_{T_1}(Comply) = EU_{T_2}(\sim Comply)$. I assume that T_1 plays Comply in case of an indifference. This assumption makes the solution more coherent by eliminating redundant equilibria. However, relaxing it does not change the implications of the model.

Lemma 2: T_2 Comply if $\theta > \frac{1}{2} + \frac{1}{2(\beta_T c_T + x)}$.

Proof:

$EU_{T_2}(Comply) = \theta(x-\epsilon) + (1-\theta)(-\beta_T c_T - \epsilon)$

$EU_{T_2}(\sim Comply) = \theta(1-\beta_T c_T - \epsilon) + (1-\theta)(1+x-\epsilon)$

T_2 Comply if $\theta(x-\epsilon) + (1-\theta)(-\beta_T c_T - \epsilon) > \theta(1-\beta_T c_T - \epsilon) + (1-\theta)(1+x-\epsilon)$. Simplifying in terms of θ:

$$\theta > \frac{1}{2} + \frac{1}{2(\beta_T c_T + x)} = \hat{\theta}_{T2} \tag{ii}$$

- $\hat{\theta}_{T2} > \hat{\theta}_{T1}$

Now I will examine the three different cases based on different levels of θ:

1. $\theta < \theta_{T1}$
2. $\theta_{T1} < \theta < \hat{\theta}_{T2}$
3. $\theta > \hat{\theta}_{T2}$

Case 1: Low Information Flow between S and T ($\theta < \hat{\theta}_{T1}$)

Lemma 1 and Lemma 2 establish that if $\theta < \hat{\theta}_{T1}$, both T_1 and T_2 will play $\sim$ Comply.

Lemma 3: S play Deal if $c_S > \frac{(1-\theta)(a-x)}{1-\theta\beta c_s}$

Proof:

$EU_S(\sim Deal) = (-c_S)$

$EU_S(Deal) = \theta(-\beta_S c_S) + (1-\theta)(x-a)$

S plays Deal if $c_s > \frac{(1-\theta)(a-x)}{1-\theta\beta_S c_S}$.

If $\theta < \hat{\theta}_{T1}$ and $c_s > \frac{(1-\theta)(a-x)}{1-\theta\beta_S c_S}$, the following beliefs and strategies constitute a **pooling Perfect Bayesian Equilibrium:**

1. T_1 : { $\sim$ Comply}
2. T_2 : {$\sim$ Comply}
3. S: Deal
4. Beliefs: Pr {Ω| Negotiate } = 1

In these cases, S will Deal despite T's non-compliance, and both Ts will Negotiate in their first moves.

If $\theta < \hat{\theta}_{T1}$ and $c_s < \frac{(1-\theta)(a-x)}{1-\theta\beta_S c_S}$, the following beliefs and strategies constitute a **pooling Perfect Bayesian Equilibrium:**

1. $T_1 : \{\sim \text{Comply}\}$
2. $T_2 : \{\sim \text{Comply}\}$
3. S: $\sim$ Deal
4. Beliefs: Pr $\{\Omega| \sim \text{Negotiate }\} = 1$

In these cases, S will play $\sim$ Deal, and both Ts will $\sim$ Negotiate in their first moves.

Case 2: Weak Information Flow between S and T ($\hat{\theta}_{T1} < \theta < \hat{\theta}_{T2}$)

$\theta_{T1} < \theta < \hat{\theta}_{T2} \rightarrow T_1, T_2 : \{Comply, \sim Comply\}$

Lemma 1 and 2 establish that T_1 will play Comply and T_2 will play $\sim$ Comply.

Lemma 4: S plays Deal if $\theta > \frac{\Omega(\beta_S c_S + x - a) - c_S - x - a}{\Omega(2+2\beta_S c_S + x - a) + 1 - \beta_S c_S - x - a}$

Proof:

$EU_S(\sim Deal) = -c_S$

$EU_S(Deal) = \Omega[\theta(1+x) + (1-\theta)(1-\beta_S c_S)] + (1-\Omega)[\theta(-\beta_S c_S) + (1-\theta)(x-a)]$

S will Deal if $EU_S(Deal) > EU_S(\sim Deal)$

Simplifying in terms of θ:

$$\theta > \frac{\Omega(\beta_S c_S + x - a) - c_S - x - a}{\Omega(2 + 2\beta_S c_S + x - a) + 1 - \beta_S c_S - x - a} \tag{iii}$$

If Equation iii is not satisfied, S plays $\sim$ Deal and keep sanctions. If this is the case, a separating equilibrium forms where T_1 play Negotiate, while T_2 play $\sim$ Negotiate.

For Equation iii to be satisfied, θ needs to be within the range of $[\frac{1}{2}, \frac{1}{2} + \frac{1}{2(\beta_T c_T + x)}]$

For the above range to exist, the following condition needs to be satisfied:

$$\frac{\beta_T c_T + x + 1}{2(\beta_T c_T + x)} - \frac{\Omega(\beta_S c_S + x - a) - c_S - x - a}{\Omega(2 + 2\beta_S c_S + x - a) + 1 - \beta_S c_S - x - a} > 0 \tag{5}$$

Using comparative statics, we can observe whether the range is shrinking or expanding with respect to an increase in a given variable. I

Comparative statics with respect to Ω:

$\frac{\partial u}{\partial \Omega} > 0 \rightarrow$ we can conclude that the probability that S plays Deal increases for higher values of Ω, for the cases where $\hat{\theta}_{T1} < \theta < \hat{\theta}_{T2}$.

Comparative statics with respect to a:

$\frac{\partial u}{\partial a} < 0 \rightarrow$ we can conclude that the probability that S plays Deal decreases for higher values of a, for the cases where $\hat{\theta}_{T1} < \theta < \hat{\theta}_{T2}$.

Case 3: Dense Information Flow between S and T ($\theta > \frac{1}{2} + \frac{1}{2(\beta_T c_T + x)}$)

Lemma 1 and 2 establish that both Ts play Comply if $\theta > \hat{\theta_{T_2}}$

Lemma 6: S always plays Deal.

Proof:

$EU_S(\sim Deal) = -c_S$

$EU_S(Deal) = \theta(1+x) + (1-\theta)(1-\beta_S c_S)$

S Deal if $EU_S(Deal) > EU_S(\sim Deal)$

This will always be true.

Consider the pooling equilibrium, where both T_1, T_2: $\{Negotiate, Negotiate\}$

$EU_{T_1}(Negotiate) = \theta(x-\epsilon) + (1-\theta)(-\beta_T c_T - \epsilon)$

$EU_{T_1}(\sim Negotiate) = -c_T$

T_1 has no incentive to deviate if $EU_{T_1}(Negotiate) > EU_{T_1}(\sim Negotiate)$

T_1 will play Negotiate if:

$$x > \frac{(1-\theta)(\beta_T c_T) + \epsilon - c_T}{\theta} = \hat{x_{T_1}} \tag{6}$$

$EU_{T_2}(Negotiate) = (\theta)(x-\epsilon) + (1-\theta)(-\beta_T c_T - \epsilon)$

$EU_{T_2}(\sim Negotiate) = 1 - c_T$

$EU_{T_2}(Negotiate) > EU_{T_2}(\sim Negotiate)$ if:

$$x > \frac{1 + \beta_T c_T - \theta\beta_T c_T + \epsilon - c_T}{\theta} = \hat{x_{T_1}} \tag{7}$$

- $\hat{x_{T_1}} < \hat{x_{T_2}}$

Proposition 1: When the information flow between S and T is dense ($\theta > \frac{1}{2} + \frac{1}{2(\beta_T c_T + x)}$) sanctions are lifted and the following strategies and beliefs constitute a pooling Bayesian equilibrium, only if $x > \frac{1+\beta_T c_T - \theta\beta_T c_T + \epsilon - c_T}{\theta} = \hat{x_{T_2}}$

1. T_1: Negotiate, Comply
2. T_2: Negotiate, Comply
3. Sender: Deal
4. Beliefs: $Pr[\Omega|Negotiate] = \Omega$

Proposition 2: When the information flow between S and T is dense ($\theta > \frac{1}{2} + \frac{1}{2(\beta_T c_T + x)}$), the following strategies and beliefs constitute a separating Bayesian equilibrium, only if $\hat{x_{T_1}} < x < \hat{x_{T_2}}$

1. T_1: Negotiate, Comply
2. T_2: $\sim$ Negotiate, Comply
3. Sender: Deal
4. Beliefs: $Pr[\Omega|Negotiate] = 1$ & $Pr[\Omega| \sim Negotiate] = \Omega$

Proposition 3: When the information flow between S and T is dense ($\theta > \frac{1}{2} + \frac{1}{2(\beta_T c_T + x)}$), the following strategies and beliefs constitute a pooling Bayesian equilibrium, only if $x < \hat{x_{T_1}}$

1. T_1: $\sim$ Negotiate, Comply
2. T_2: $\sim$ Negotiate, Comply
3. Sender: Deal
4. Beliefs: $Pr[\Omega|Negotiate] = 1$ & $Pr[\Omega| \sim Negotiate] = 0$

Empirical Implication: Dense information flow between S and T (higher levels of θ) facilitates sanctions removal, only if expected benefits of resumed economic interactions (x) are high. If the expected economic benefits are not high, the targets will select out and quit at their first nodes. If it is high, they move forward with the sanctions removal process and dense information flows induce compliance and facilitates sanctions removal.

Supplementary Empirical Appendix for Chapter 2

This section presents additional descriptive statistics and robustness checks for Chapter 2. First, Table A.1 presents the same results as Table 2 (the main results table in the Chapter 2), with the inclusion of the temporal controls that were omitted for brevity.

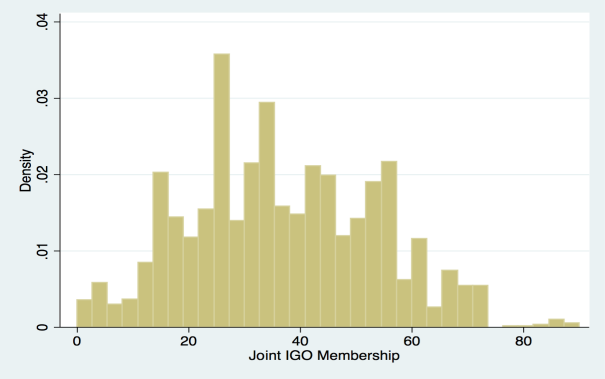
Table A.1: Probit: Sanctions Removal

	M1: Baseline	M2: Full Model
Joint IGO Membership	0.015**	0.021***
	(0.00)	(0.01)
Δ in T's Trade Volume	0.125***	0.138***
	(0.03)	(0.04)
Joint IGO Membership x Δ in T's Trade Volume	-0.002*	-0.003**
	(0.00)	(0.00)
Trade Dependence		-0.750*
		(0.37)
Multiple Issues		-0.231*
		(0.11)
Multiple Senders		-0.005
		(0.12)
Foreign Policy Similarity		0.180
		(0.13)
GDP Ratio (per capita)		0.196
		(0.35)
Time	0.109**	0.167***
	(0.04)	(0.05)
Time Squared	-0.008**	-0.013***
	(0.00)	(0.00)
Time Cubed	0.000**	0.000***
	(0.00)	(0.00)
Constant	-1.761***	-2.109***
	(0.20)	(0.56)
N	1083	795
Log L	-413.5	-308.9

- Estimates are derived from a probit model with robust s.e. clustered on the target state (in parenthesis).
- Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Next, Figure A.1 portrays the histogram of the *Joint IGO Membership* variable.

Figure A.1: Histogram of *Joint IGO Membership* Variable



Accounting for Sanctions Episodes with Missing End Dates

There are 29 cases in my dataset for which the TIES dataset does not provide an end date. I employ two different coding decisions to account for these cases. First, I include all sanction years between the imposition year and the year after the "ongoing as of" year and code the dependent variable as 1 for the year after the last recorded incident. Findings obtained through the this strategy are presented in Chapter 2. Second, I include all sanction years between the imposition year and the year after the "ongoing as of" year and code the dependent variable as 1 for the last year of the episode, and the results are provided in Table 2 in Chapter 2. They are very similar to the findings presented in the chapter and suggest that the results are not sensitive to how these 29 cases are treated.

Accounting for Episodes that Last Less than a Year

There are 77 episodes in my dataset that were imposed and lifted on the same year. To ensure that these short-lived are not biasing the results by blurring the differentiation between imposition and removal, Table A.3 presents the results from a sample where such cases are included to the analysis. The number of unique sanctions episodes analyzed increases from 232 to 309. Model 1 employs the same dependent variable employed in the paper, and Model 2 employs the dependent variable that codes the dependent variable as 0 for the cases with no recorded end date.

Table A.2: Probit: Sanctions Removal-Accounting for Sanctions with Recorded End Dates

	M1: Baseline	M2: Full Model
Joint IGO Membership	0.013**	0.020**
	(0.00)	(0.01)
Δ in T's Trade Volume	0.113***	0.122***
	(0.03)	(0.04)
Joint IGO Membership x Δ in T's Trade Volume	-0.002*	-0.002*
	(0.00)	(0.00)
Trade Dependence		-0.810*
		(0.39)
Foreign Policy Similarity		0.111
		(0.12)
Multiple Issues		-0.155
		(0.11)
Multiple Senders		0.059
		(0.12)
GDP Ratio (per capita)		0.057
		(0.38)
Constant	-1.458***	-1.642**
	(0.18)	(0.59)
Number of Observations	1083	795
Log L	-393.0	-299.0

- Robust s.e are in paranthesis. Estimates are derived from a probit model with s.e. clustered on the target state.
- Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
- Temporal controls are omitted.

Table A.3: Probit: Sanctions Removal-Accounting for Short-Lived Episodes

	Model 1	Model 2
Joint IGO Membership	0.013*	0.015*
	(0.01)	(0.01)
Δ in T's Trade Volume	0.093**	0.089*
	(0.04)	(0.04)
Joint IGO Membership x Δ in T's Trade Volume	-0.002*	-0.002*
	(0.00)	(0.00)
Trade Dependence	-0.843*	-0.913*
	(0.35)	(0.36)
Foreign Policy Similarity	0.178	0.135
	(0.12)	(0.12)
Multiple Issues	-0.239*	-0.181
	(0.10)	(0.11)
Multiple Senders	-0.123	-0.049
	(0.11)	(0.12)
GDP Ratio (per capita)	-0.022	-0.140
	(0.31)	(0.33)
Constant	-0.851	-0.702
	(0.51)	(0.52)
Number of Observations	838	838
Log L	-377.7	-362.1

- Robust standard errors are in paranthesis. Estimates are derived from a probit model with s.e. clustered on the target state.
- Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
- Temporal controls are omitted.

Rare Events Logistic Regression

Next, I re-ran the main analysis using rare event logistic model, using the Relogit package in Stata. 85% of the binary dependent is 0 and King and Zeng (2001) show that high numbers of "non-events" can underestimate the probability of rare events and might lead to errors in coefficients and their standard errors. Table A.4 shows that the results of the probit model presented in the main paper are not driven by the high frequency of 0s in the dependent variable, as the results remain the same.

Table A.4: Rare Events Logistic Regression: Sanctions Removal

	Model
Joint IGO Membership	0.036**
	(0.01)
Δ in T's Trade Volume	0.223**
	(0.07)
Joint IGO Membership x Δ in T's Trade Volume	-0.004*
	(0.00)
Trade Dependence	-1.234
	(0.69)
Multiple Issues	-0.415*
	(0.18)
Multiple Sender	0.005
	(0.21)
Foreign Policy Similarity	0.325
	(0.22)
GDP Ratio (per capita)	0.343
	(0.61)
Time	0.323***
	(0.09)
Time-Squared	-0.025***
	(0.01)
Time-Cubed	0.000***
	(0.00)
Constant	-3.647***
	(1.03)
Number of Observations	795

- Estimates are derived from a rare events logistic model with standard errors clustered on the target state.
- Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Accounting for Time Dependence

To account for the time dependence, I use cubic polynomial approximation method proposed by Carter and Signorino (2010).[54] However, Beck, Katz and Tucker (1998) offer an alternative strategy to model time dependence in binary data by incorporating splined time in binary time series cross sectional samples. Table A.5 replicates the main results with the inclusion of splined times as regressors. The results are not sensitive to how time dependence in is treated. Model 1 employs the same dependent variable employed in Chapter 2, and Model 2 employs the dependent variable that codes the dependent variable as 0 for the cases with no recorded end date.

Sample Restricted to Minor c_S Cases

The solution of the game theoretic model presented in Chapter 2 reveals that there are some cases in which the sender prefers to end sanctions, even if the target is known to be opportunistic and is expected to keep pursuing its offensive behavior. If the costs of sanctions, c_S, is high for the sender, it has an incentive to end sanctions to avoid causing further harm to its own economy, and its decision to end sanctions is not necessarily based on the target's compliance. I subject my empirical analysis to a harder test by limiting the dataset to the cases where the costs of sanctions are only minor to the sender. This is a harder test, since the sample is limited to the cases where bargaining problems need to be solved to end sanctions. TIES Dataset codes "Sender Economic Costs" as minor (1), major (2), and severe (3) and I re-ran the main analysis by restricting the sample to the cases where "Sender Economic Costs" is coded as 1. The results are presented in Table A.6. Model 1 employs the same dependent variable employed in the paper, and Model 2 employs the dependent variable that codes the dependent variable as 0 for the cases with no recorded end date.

[54] I use the *btscs* package in Stata.

Table A.5: Probit: Sanction Removal - with the Inclusion of Splines

	Model 1	Model 2
Joint IGO Membership	0.018**	0.020**
	(0.01)	(0.01)
Δ in T's Trade Volume	0.122***	0.129***
	(0.04)	(0.04)
Joint IGO Membership x Δ in T's Trade Volume	-0.002*	-0.003*
	(0.00)	(0.00)
Trade Dependence	-0.774*	-0.798*
	(0.34)	(0.36)
Foreign Policy Similarity	0.163	0.141
	(0.12)	(0.12)
Multiple Issues	-0.198*	-0.142
	(0.10)	(0.11)
Multiple Senders	-0.010	0.092
	(0.11)	(0.12)
GDP Ratio (per capita)	0.244	0.017
	(0.32)	(0.39)
Time Until Removal	0.758***	0.562***
	(0.21)	(0.15)
Spline 1	0.182**	0.082**
	(0.06)	(0.03)
Spline 2	-0.072**	-0.023**
	(0.03)	(0.01)
Spline 3	0.006	0.001
	(0.00)	(0.00)
Constant	-2.122***	-1.992***
	(0.56)	(0.60)
Number of Observations	795	795
Log L	-308.2	-292.8

- Estimates are derived from a probit model with robust s.e. clustered on the target state.
- Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ (Temporal controls are omitted)

Table A.6: Probit: Sanctions Removal - Minor c_S Cases

	Model 1	Model 2
Joint IGO Membership	0.019**	0.020**
	(0.01)	(0.01)
Δ in T's Trade Volume	0.126*	0.123*
	(0.05)	(0.05)
Joint IGO Membership x Δ in T's Trade Volume	-0.003*	-0.003*
	(0.00)	(0.00)
Trade Dependence	-0.746*	-0.715
	(0.38)	(0.38)
Foreign Policy Similarity	0.237	0.207
	(0.13)	(0.13)
Multiple Issues	-0.183	-0.092
	(0.11)	(0.12)
Multiple Senders	-0.015	0.077
	(0.13)	(0.13)
GDP Ratio (per capita)	0.096	-0.173
	(0.42)	(0.48)
Time	0.192***	0.210***
	(0.05)	(0.06)
Time Squared	-0.014***	-0.015***
	(0.00)	(0.00)
Time Cubed	0.000***	0.000**
	(0.00)	(0.00)
Constant	-2.006**	-1.855**
	(0.66)	(0.72)
Number of Observations	708	708

- Estimates are derived from a probit model with robust s.e. clustered on the target state.
- Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Accounting for Global Trade Trends

Table A.7 replicates the main model by using an alternative operationalization of the attractiveness of sanctions relief. To ensure that the results are not driven by the increases in global trade levels over time, I adjusted the Δ *in T's Trade Volume* variable by calculating the difference between the change in target's trade volume over the course of a sanctions episode and the changes in the mean of global trade in the same time period. For both calculations, I used the year before the sanctions imposition as the baseline. Positive values indicate that the change in T's total trade volume compared to the year before sanctions were imposed is higher than the change in the mean of the global trade. Using this new operationalization does not alter the results. I find that the probability of sanctions removal is higher if there is dense information flow between senders and targets. And this effect diminishes

as the target's trade increases under sanctions more than the global trade does. Model 1 employs the same dependent variable employed in Chapter 2, and Model 2 employs the dependent variable that codes the dependent variable as 0 for the cases with no recorded end date.

Table A.7: Probit: Sanctions Removal-Global Trade Trends

	Model 1	Model 2
Joint IGO Membership	0.021***	0.022***
	(0.01)	(0.01)
Δ in T's Trade - Global Trade Adjusted	1.415***	1.462***
	(0.36)	(0.37)
Joint IGO x Δ in T's Trade - Global Trade Adjusted	-0.029**	-0.032**
	(0.01)	(0.01)
Trade Dependence	-0.803*	-0.767*
	(0.37)	(0.36)
Multiple Issues	-0.232*	-0.162
	(0.10)	(0.11)
Multiple Senders	-0.012	0.079
	(0.12)	(0.13)
Foreign Policy Similarity	0.164	0.126
	(0.12)	(0.13)
GDP Ratio (per capita)	0.250	0.057
	(0.36)	(0.42)
Time	0.175***	0.182***
	(0.05)	(0.05)
Time Squared	-0.013***	-0.014**
	(0.00)	(0.00)
Time Cubed	0.000***	0.000**
	(0.00)	(0.00)
Constant	-2.139***	-2.078***
	(0.57)	(0.62)
Number of Observations	795	795
Log L	-309.1	-292.4

- Estimates are derived from a probit model with robuts s.e. clustered on the target state.
- Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Examining Outliers

As expected, the number of cases in which target's trade volume grows drastically under sanctions is rare. To ensure that the distribution of the Δ *in T's Trade Change* variable is not driving the results, I identify the extreme values of the variable and run the models excluding the cases.[55] Model 1

[55]I looked at the highest 1 percent of the data, and dropped the cases where Δ *in T's Trade Change*¿18.

in Table A.8 employs the same dependent variable employed in Chapter 2. Model 2 employs the dependent variable that codes the dependent variable as 0 for the cases with no recorded end dates. Model 3 includes the cases where the imposition year and the removal are the same.

Table A.8: Probit: Sanctions Removal

	Model 1	Model 2	Model 3
Joint IGO Membership	0.021***	0.023***	0.013*
	(0.01)	(0.01)	(0.01)
Δ in T's Trade Volume	0.199**	0.208**	0.154**
	(0.07)	(0.07)	(0.05)
Joint IGO Membership x Δ in T's Trade Volume	-0.004*	-0.004**	-0.003**
	(0.00)	(0.00)	(0.00)
Trade Dependence	-0.715	-0.676	-0.850*
	(0.37)	(0.36)	(0.35)
Foreign Policy Similarity	0.164	0.125	0.152
	(0.13)	(0.13)	(0.11)
Multiple Issues	-0.243*	-0.174	-0.242*
	(0.11)	(0.11)	(0.10)
Multiple Senders	-0.000	0.092	-0.103
	(0.12)	(0.13)	(0.11)
GDP Ratio (per capita)	0.235	0.050	0.038
	(0.35)	(0.41)	(0.28)
Number of Observations	792	792	835
Log L	-306.6	-289.8	-373.7

- Estimates are derived from a probit model with robust s.e (in paranthesis) clustered on the target.
- Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ (Temporal controls are omitted.)

Additionally, I identified the observations with high residuals and check if the high residual observations have also high leverage. Figure A.2 presents the leverage vs. residual squared plot. It is sorted by the *caseid* variable - a unique identifier for each sanctions episode. Points above the horizontal line have higher than average leverage and points to the right of the vertical line have larger than average residuals. For instance episode with the caseid 1952010802 has a very high residual (i.e the difference between the predicted and observed value), but it does not have much leverage; therefore, it is not of concern. However, the cases with large residuals that also have high leverage might be problematic, such as the case 2000122002. Dropping this high residual-high leverage case does not alter the results.

Figure A.2: Leverage vs. Residual Squared Plot

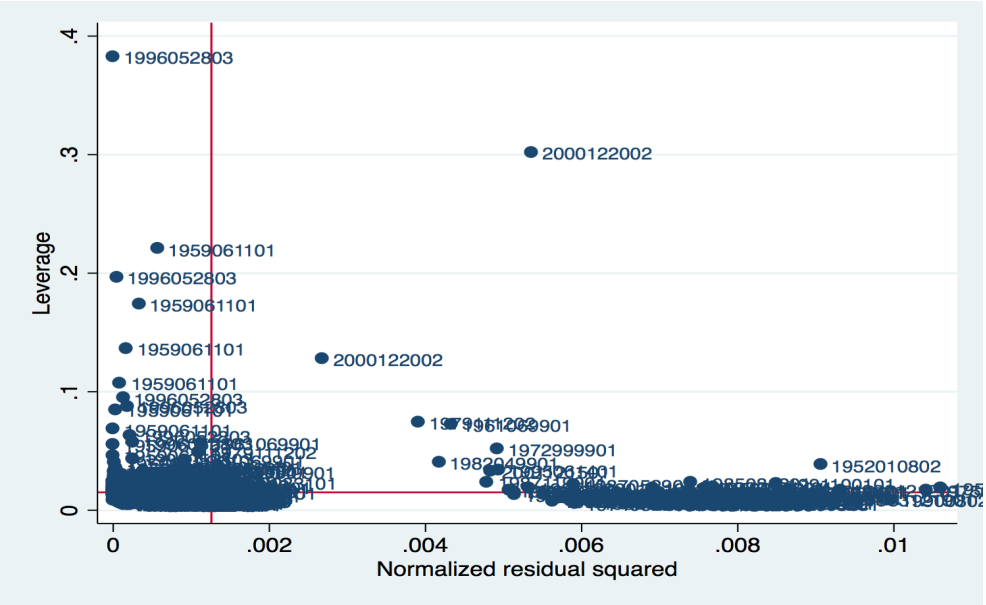


Table A.9: Probit: Sanctions Removal - High Residual/High Leverage Case Dropped

	Model
Joint IGO Membership	0.022***
	(0.01)
Δ in T's Trade Volume	0.189**
	(0.07)
Joint IGO Memberhship x Δ in T's Trade Volume	-0.004*
	(0.00)
Trade Dependence	-0.724*
	(0.37)
Multiple Issues	-0.240*
	(0.11)
Multiple Senders	-0.001
	(0.12)
Foreign Policy Similarity	0.171
	(0.13)
GDP Ratio (per capita)	0.238
	(0.35)
Constant	-2.183***
	(0.57)
Number of Observations	793

- Estimates are derived from a probit model with robust s.e (in paranthesis) clustered on the target.
- Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ (Temporal controls are omitted.)

Duration Analysis

Lastly, I re-ran the main analysis using Cox Proportional Hazard Regression model. Since Cox models does not assume a particular distribution for the dependent variable and the nature of the hazard function, I prefer it over alternative duration model specifications. Utilizing a Cox model further allows me to model time dependence in the data, in addition to using cubic polynomial approximation and cubic splines employed in the probit model. Table A.10 presents coefficient estimates for each covariate added to the Cox model. Model 1 employs the same dependent variable employed in the paper, and Model 2 employs the dependent variable that codes the dependent variable as 0 for the cases with no recorded end date.

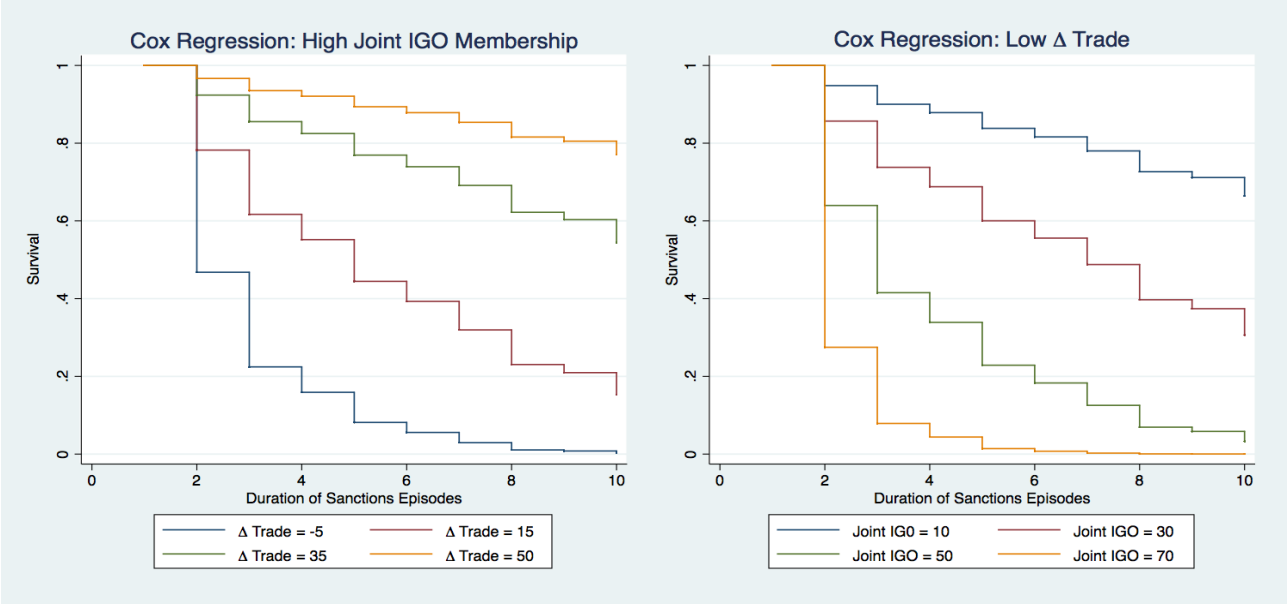
Table A.10: Cox Proportional Hazard Regression: Duration until Sanctions End

	Cox Model 1	Cox Model 2
Joint IGO Membership	0.029**	0.033***
	(0.01)	(0.01)
Δ in T's Trade Volume	0.231***	0.233***
	(0.05)	(0.06)
Joint IGO Membership x Δ in T's Trade Volume	-0.005***	-0.005***
	(0.00)	(0.00)
Trade Dependence	-0.836	-0.860
	(0.57)	(0.58)
Multiple Senders	0.037	0.167
	(0.17)	(0.18)
Multiple Issues	-0.343*	-0.269
	(0.14)	(0.15)
Foreign Policy Similarity	0.315	0.246
	(0.18)	(0.19)
GDP Ratio (per capita)	0.176	-0.060
	(0.50)	(0.60)
Number of Observations	795	795

- Robust standard errors are in paranthesis. Coefficient estimates are derived from cox proportional hazard model with standard errors clustered on the target state.
- $*p < 0.05, **p < 0.01, ***p < 0.001$

To interpret the results visually, Figure A.3 plots the predicted survival rates for two separate cases. The plot on the left portrays the survival of sanctions episodes, holding institutional connectedness between the sender and the target at a high value (60) and varying T's trade volume change. The plot on the right holds targets trade volume change at a negative value, indicating that T's trade volume diminished under sanctions and varies *Joint IGO Membership*.

Figure A.3: Effect of Δ *T's Trade* and *Joint IGO Membership* on the Duration of Sanctions



The plot on the left shows that higher levels of joint IGO membership decreases the likelihood of sanctions survival and increases the likelihood of sanctions removal over time. However, this facilitating effect is stronger for the targets that are harmed by the sanctions, and thus place a high value on the proposed sanctions relief. Even if high levels of joint IGO membership increases the odds of sanctions removal for all targets over time, sanctions are more likely to persist against targets that can increase their total trade volume while being under sanction compared to targets whose trade volume shrinks under sanctions.

The graph on the right demonstrates that sanctions are less likely to persist over time if targets' trade volume shrinks under sanctions and if targets are expected to place a high value on sanctions relief. However, if the institutional connectedness between the sender and the target is weak, inefficient economic sanctions have a higher chance of persisting compared to the cases where senders and targets are more connected to one another through institutional channels.

APPENDIX B: SUPPORTING INFORMATION FOR CHAPTER 3

Supplementary Empirical Appendix for Chapter 3

This section provides descriptive statistics, presents the results for robustness checks, and provides the list of sanctions episodes coded for the years between 2005-2012 in an effort to increase the temporal scope of my analysis. First, Table B.1 presents the full results with the inclusion of temporal variables, following (Carter and Signorino, 2010).

Table B.1: Logistic Regression

DV: Initiating a New Sanctions Episode	Model 1	Model 2	Model 3
Bad Behavior	0.302	0.479	
	(0.28)	(0.28)	
Change in Source of Leader Support	0.580*	0.589*	0.995**
	(0.24)	(0.26)	(0.34)
Growth of S's Trade with T	-0.475**	-0.515**	-0.207
	(0.17)	(0.17)	(0.23)
Foreign Policy Affinity	-0.712**	-0.730***	-0.641*
	(0.23)	(0.21)	(0.28)
Frequency of the Dyad	0.323***	0.327***	0.292***
	(0.06)	(0.05)	(0.07)
Multilateral	0.572*	0.521*	0.401
	(0.25)	(0.23)	(0.34)
Multiple Issues	-0.409	-0.623*	-0.806*
	(0.24)	(0.27)	(0.38)
Relative CINC Scores	-0.000*	-0.000	0.002
	(0.00)	(0.00)	(0.00)
Target Acquiescence	0.268	0.275	0.024
	(0.23)	(0.23)	(0.29)
Count of Post-Sanctions Years	-0.211***	-0.180**	-0.227**
	(0.06)	(0.07)	(0.08)
Time-Squared	0.012**	0.010**	0.013**
	(0.00)	(0.00)	(0.00)
Time-Cubed	-0.000*	-0.000*	-0.000*
	(0.00)	(0.00)	(0.00)
Constant	-4.138***	-4.134***	-3.508***
	(0.36)	(0.37)	(0.53)
N	2153	1566	619

- Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
- Estimates are derived from a logit model and standard errors are clustered around the targetstate.

Accounting for the Episodes with No Recorded End Dates

Next, I account for episodes with no recorded end dates. I obtain the main results presented in Chapter 3 using a sample where the cases with no recorded end dates are accounted for by using TIES dataset's *ongoing as of year* variable. I treat the year after the *ongoing as of year* as the end year and construct post-sanction years for the years following that end date. As a robustness check, I drop the cases with no recorded end dates and re-run the main models.

Table B.2: Logistic Regression

DV: Initiating a New Sanctions Episode	Model 1	Model 2	Model 3
Bad Behavior	0.240	0.418	
	(0.27)	(0.27)	
Change in Source of Leader Support	0.538*	0.534*	0.924**
	(0.24)	(0.26)	(0.34)
Growth of S's Trade with T	-0.452**	-0.489**	-0.173
	(0.17)	(0.17)	(0.23)
Foreign Policy Affinity	-0.612**	-0.619**	-0.493
	(0.23)	(0.21)	(0.27)
Frequency of the Dyad	0.329***	0.330***	0.307***
	(0.06)	(0.06)	(0.08)
Multilateral	0.581*	0.532*	0.467
	(0.25)	(0.23)	(0.35)
Multiple Issues	-0.370	-0.583*	-0.766
	(0.25)	(0.27)	(0.41)
Relative CINC Scores	-0.000*	-0.000*	0.002*
	(0.00)	(0.00)	(0.00)
Target Acquiescence	0.289	0.279	0.076
	(0.25)	(0.25)	(0.34)
Count of Post-Sanctions Years	-0.199**	-0.166*	-0.219**
	(0.06)	(0.07)	(0.08)
Time-Squared	0.011**	0.010*	0.013**
	(0.00)	(0.00)	(0.00)
Time-Cubed	-0.000*	-0.000*	-0.000*
	(0.00)	(0.00)	(0.00)
Constant	-4.157***	-4.113***	-3.641***
	(0.38)	(0.38)	(0.55)
N	2008	1447	564

- Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
- Estimates are derived from a logit model and standard errors are clustered around the targetstate.

Coding Sanctions Recurrence (2006-2012)

There were 85 security-related sanctions that have post-sanctions years after the year 2005, the last year for which the TIES dataset contains information on threats and imposition of economic sanctions. In order to increase the temporal scope of my analysis, I identified instances of sanctions recurrence in the years between 2006-2012, primarily using *Lexis Nexis* and government reports. I identified a total of 22 sanctions episodes that took place in the post-sanctions years of the security-related episodes coded by TIES.

1. **Caseid:** 19770581 **Dyad:** US-Libya **End Year:** 2006

   Sanctions Recurrence: (**2011**) U.S. closed its embassy in Tripoli and imposed sanctions on Libya and froze the American-held assets of Qaddafi, his family, and senior members of the government due to the violent crackdown of citizens.

2. **Caseid:** 1984073101 **Dyad:** US-Iraq **End Year:** 2003

   Sanctions Recurrence: (**2007**) U.S. imposed sanctions on certain individuals, blocking their property and economic transactions, due to their "undermining efforts to promote political reform in Iraq." - Executive Order 13439 of July 17, 2007.

3. **Caseid:** 1989022301 **Dyad:** US-Iran **End Year:** 1998

   Sanctions Recurrence: (**2006**) U.S. imposed sanctions on Iran to prohibit all transactions directly or indirectly involving Bank Sadaret, Iran's largest bank.

4. **Caseid:** 1990080202 **Dyad:** US-Iraq **End Year:** 2002

   Sanctions Recurrence: (**2007**) See the details of the Executive Order 13439 of July 17, 2007 provided for Case 2.

5. **Caseid:** 1990122101 **Dyad:** US-Guatemala **End Year:** 2008

   Sanctions Recurrence: (**2012**) OFAC imposes sanctions on individuals and entities in Guatemala due to their ties with a Guatemalan trafficker and violation of the Kingpin Act.

6. **Caseid:** 1992031001 **Dyad:** US-Iraq **End Year:** 2002

Sanctions Recurrence: (**2007**) See the details of the Executive Order 13439 of July 17, 2007 provided for Case 2.

7. **Caseid:** 1992071701 **Dyad:** Russia-Estonia **End Year:** 1997

   Sanctions Recurrence: (**2007**) Russia threatens to impose sanctions on Estonia after the Estonian president provides a legal basis for a possible demolition of the monument to Soviet soldiers in the center of Tallinn.

8. **Caseid:** 1995020801 **Dyad:** US-Lebanon **End Year:** 2000

   Sanctions Recurrence: (**2006**) The U.S. implemented an arms embargo on the export of arms and defense services to Lebanon, in accordance with UNSCR 1701.

9. **Caseid:** 1995030103 **Dyad:** US-Iran **End Year:** 1998

   Sanctions Recurrence: (**2006**) See case 3 for sanctions imposed Bank Sadaret.

10. **Caseid:** 1996032706 **Dyad:** US-Venezuela **End Year:** 2004

    Sanctions Recurrence: (**2006**) The U.S. banned arms sales to Venezuela due to the government's lack of assistance to the U.S. in combating terrorism.

11. **Caseid:** 1999021102 **Dyad:US-Eritrea** US-Venezuela **End Year:** 2000

    Sanctions Recurrence: (**2006**) The U.S. imposes sanctions on Eritrea to improve religious freedoms. Information taken from the GIGA Dataset.

12. **Caseid:** 2000051901 **Dyad:US-Fiji** US-Venezuela **End Year:** 2001

    Sanctions Recurrence: (**2006**) Assistance to Fiji, including military aid, has been suspended by the U.S. following the military takeover.

13. **Caseid:** 2000061405 **Dyad:US-Venezuela** US-Venezuela **End Year:** 2009

    Sanctions Recurrence: (**2011**) The U.S. imposes travel bans on key government officials due to their believed involvement in human rights abuses, acts of public corruption, and involvement in drug trafficking.

14. **Caseid:** 2000061407 **Dyad:US-Fiji** US-Venezuela **End Year:** 2003

    Sanctions Recurrence: (**2006**) See Case 12.

15. **Caseid:** 2000080102 **Dyad:US-Liberia** US-Venezuela **End Year:** 2003

    Sanctions Recurrence: (**2011**) The Chair of the House Subcommittee on Africa threatened Liberia with sanctions, saying that "the US will hold accountable any and all leaders and their supporters seeking to undermine Liberia's peace and democracy by all means, including the use of sanctions.

16. **Caseid:** 2000081601 **Dyad:**US-Mali **End Year:** 2009

    Sanctions Recurrence: (**2012**) Following the military takeover in the country, the U.S. imposed sanctions (travel bans and asset freezes) on the leaders of the coup and their families.

17. **Caseid:** 2001121501 **Dyad:**India-Pakistan **End Year:** 2003

    Sanctions Recurrence: (**2008**) India warned Pakistan that it needed to act fast in the wake of Mumbai terror attacks or else face possible economic sanctions.

18. **Caseid:** 2002020502 **Dyad:**US-Costa Rica **End Year:** 2009

    Sanctions Recurrence: (**2011**) U.S. Department of State downgraded Costa Rica from Tier 2 to the Tier 2 watchlist, designating the country as a source of human sex trafficking and forced labor. The Tier 2 countries are in danger of potential economic sanctions from the U.S.

19. **Caseid:** 2003032401 **Dyad:**US-Pakistan **End Year:** 2005

    Sanctions Recurrence: (**2007**) U.S. imposes sanctions on Pakistan for the country's support to the Mugabe regime in Zimbabwe.

20. **Caseid:** 2003071401 **Dyad:**US-Pakistan **End Year:** 2004

    Sanctions Recurrence: (**2009**) The U.S. imposes sanctions against the military leader of Guinea, members of the junta and other individuals that are believed to undermine the restoration of democracy and the rule of law.

21. **Caseid:** 2005031501 **Dyad:**US-Kenya **End Year:** 2009

    Sanctions Recurrence: (**2010**) The U.S. Ambassador-at-large for War Crimes stated that Kenya could face international sanctions over failure to arrest genocide fugitive Felicien Kabuga and sitting on vital information that can fast-track the arrest of Kabuga.

22. **Caseid:** 2005042901 **Dyad:**United Kingdom-Uganda **End Year:** 2007

    Sanctions Recurrence: (**2010**) The head of the UK's official government aid agency has warned Uganda that unless government takes action on corruption, they will withhold aid.

APPENDIX C: SUPPORTING INFORMATION FOR CHAPTER 4

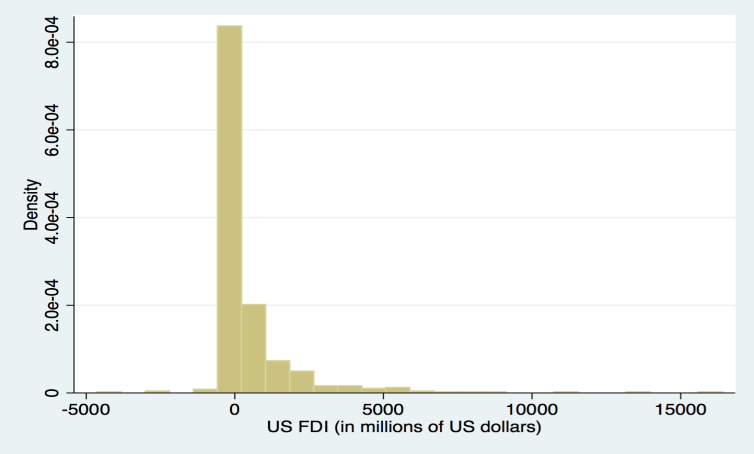
Supplementary Empirical Appendix for Chapter 4

This section provides additional robustness checks and descriptive statistics for Chapter 4.

Inverse Hyperbolic Sine (IHS) Transformation

FDI Data is highly skewed, as depicted in Figure C.1. It ranges between -4601 and 16428 in millions of US dollars, with a mean of 555 and a standard deviation of 1453.

Figure C.1: Histogram of Net US FDI Inflow into Target States



Taking the natural logarithm of highly skewed variables is common practice. However, this transformation is not mathematically possible for the FDI data, since it contains many zero and negative values. Therefore, I use the inverse hyperbolic sine (IHS) transformation, following Barry and Kleinberg (2015); Burbridge, Magee and Robb (1988). The transformation is used using the following formula, where x represents the US FDI variable:

$$ln[x + \sqrt{x * (x + 1)}] \tag{8}$$

Figure C.2 presents the histogram of the US FDI variable after the IHS transformation.

Figure C.2: Histogram of Net US FDI Inflow into Target States - IHS Transformation

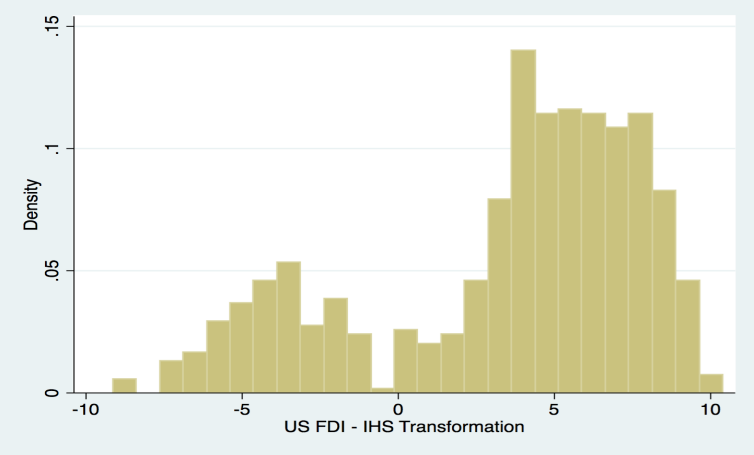


Table C.1 and C.2 presents the models presented in Table 1 and Table 2 in Chapter 4, with temporal controls that were omitted for brevity.

Table C.1: The Effect of Assessed Likelihood of Policy Continuity on Net FDI Inflows in Target States

	Model 1	Model 2	Model 3	Model 4
Change in Source of Leader Support	-39.795**	-43.164**	-44.496**	-48.285***
	(13.01)	(14.04)	(13.65)	(14.28)
Presidential Approval	-0.505	-0.588*	-0.504	-0.436
	(0.27)	(0.29)	(0.28)	(0.29)
SOLS Change x Presidential Approval	1.599**	1.752**	1.833***	1.971***
	(0.50)	(0.54)	(0.52)	(0.54)
Presidential Approval^2	0.005	0.005*	0.005	0.004
	(0.00)	(0.00)	(0.00)	(0.00)
SOLS Change x Presidential Approval^2	-0.016***	-0.017***	-0.018***	-0.020***
	(0.00)	(0.00)	(0.00)	(0.01)
FDI Inflow$_{t-1}$	0.352***	0.247***	0.165***	0.155***
	(0.04)	(0.04)	(0.05)	(0.05)
Financial Openness		0.616***	0.301*	0.332*
		(0.14)	(0.15)	(0.15)
Population (ln)		0.455***	0.282	0.302
		(0.12)	(0.17)	(0.17)
Economic Growth		0.090*	0.117**	0.121**
		(0.04)	(0.04)	(0.04)
US Distance			-0.000*	-0.000**
			(0.00)	(0.00)
US Trade			0.636***	0.643***
			(0.14)	(0.16)
Executive Constraints				-0.002
				(0.09)
Regime Durability				-0.007
				(0.01)
Count of Post-Sanctions Years	1.844	2.220	2.135	2.240
	(1.38)	(1.50)	(1.45)	(1.49)
Time-Squared	-0.377	-0.417	-0.386	-0.408
	(0.25)	(0.27)	(0.26)	(0.27)
Time-Cubed	0.022	0.024	0.021	0.023
	(0.01)	(0.01)	(0.01)	(0.01)
Constant	13.262	6.892	4.287	2.163
	(7.30)	(7.90)	(7.71)	(7.96)
N	590	521	521	504
Adjusted R-squared	0.15	0.19	0.24	0.23

- Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
- Estimates are derived from an OLS model with robust standard errors.

Table C.2: The Effect of Sanctions Outcome on Net FDI Inflows in Target States

	Model 1	Model 2	Model 3	Model 4
Decisive Final Outcome	1.105**	1.135**	1.177**	1.060*
	(0.37)	(0.40)	(0.40)	(0.41)
FDI Inflow$_{t-1}$	0.328***	0.221***	0.165***	0.149**
	(0.04)	(0.05)	(0.05)	(0.05)
Financial Openness		0.607***	0.324*	0.406*
		(0.14)	(0.16)	(0.17)
Population (ln)		0.491***	0.394*	0.414*
		(0.13)	(0.18)	(0.18)
Economic Growth		0.083	0.104*	0.106*
		(0.04)	(0.04)	(0.04)
US Distance			-0.000**	-0.000*
			(0.00)	(0.00)
US Trade			0.445**	0.478**
			(0.15)	(0.16)
Executive Constraint				-0.006
				(0.10)
Regime Durability				-0.012
				(0.01)
Count of Post-Sanctions Years	1.299	1.731	1.739	1.872
	(1.43)	(1.53)	(1.50)	(1.54)
Time-Squared	-0.306	-0.356	-0.339	-0.365
	(0.26)	(0.28)	(0.27)	(0.28)
Time-Cubed	0.019	0.021	0.020	0.021
	(0.01)	(0.02)	(0.02)	(0.02)
Constant	0.417	-8.878**	-9.421**	-9.796**
	(2.31)	(3.26)	(3.34)	(3.44)
N	542	483	483	467
R-squared	0.13	0.18	0.21	0.20

- Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
- Estimates are derived from an OLS model with robust standard errors.

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